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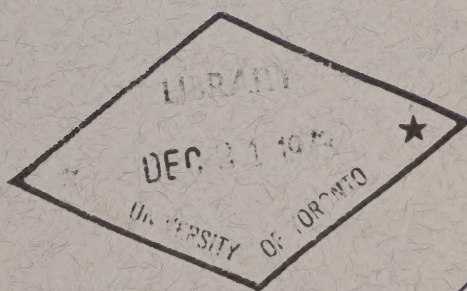


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**SUMMARY OF OCEANOGRAPHIC RECORDS
OBTAINED FROM MOORED INSTRUMENTS
IN THE STRAIT OF GEORGIA — 1969-1970
Current Velocity and Seawater Temperature
from Station H-06**

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MARINE SCIENCES BRANCH, PACIFIC REGION
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by

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May, 1972

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INTRODUCTION

The waters of the Strait of Georgia have been the subject of many oceanographic studies for more than half a century. The earlier studies of the region consisted mainly of physical, chemical and biological oceanographic descriptions of the waters and some of the main factors affecting the properties of the waters therein. The studies vary, in scope, from a brief initial description of the waters by Fraser and Cameron (1916) and a more detailed work by Hutchinson and Lucas (1931) and to a more complete treatment by Waldichuk (1957), to name a few.

In spite of the number of oceanographic studies made on these waters there was a notable lack of reliable information of the surface and subsurface circulation in the Strait. In order to relieve this deficiency, the Pacific Oceanographic Group embarked on a limited program of current velocity observations in the central portion of the Strait of Georgia. The initial observations consisted only of surface drift measurements, the results of which have already been reported (Giovando and Tabata, 1970) and a series of velocity profile measurements from anchored vessels, the results of which have also been reported (Tabata, Stickland, Wong and Giovando, 1970(a); 1970(b); 1970(c)).

In recent years the marine technology associated with automated oceanographic observations from moored instruments has advanced to the stage where it is now possible to obtain reliable data from unattended instruments for periods exceeding one month. The present series of observations to be reported here are based on data obtained from such instruments.

The primary objective of the present program of observations is to obtain current velocity records at sufficiently high frequency and of sufficient length so that it would be possible to examine the spectrum of the variability of current velocities in the frequency band between 1 cycle and 10^{-3} cycle per hour (period of few hours to few months approximately), at a representative area of the central Strait. Such data would provide, in addition to basic scientific information, solid background material that would be useful in a variety of applied oceanographic studies such as those associated with pollution and fisheries. As most of the instruments employed recorded temperatures of the water as well as current velocities, they too are reported.

A report describing the observational program, performances of current meters used, mooring technique, computer data-processing method, etc. has already been published in the Technical Report Series of the Fisheries Research Board of Canada (Tabata, Stickland and de Lange Boom, 1971).

The present report comprises the summary of oceanographic measurements obtained from Station H-06 (Fig. 1 and 2). It is the second of the series of reports associated with the program of oceanographic observations from moored instruments in the Strait of Georgia to be issued.

The summary contains:

- 1) histogram of current speed
- 2) histogram of current direction
- 3) histogram of current direction in polar form
- 4) histogram of temperature (if applicable)
- 5) progressive vector diagram of current velocities

Local standard time, Pacific Standard Time (P.S.T.), is used throughout (time zone + 8).

BACKGROUND INFORMATION

The only current measurements made in the open waters of the Strait, prior to 1953, were by means of drift bottles. They were carried out under the direction of Dr. W.A. Clemens. The data so obtained have been used later to interpret the surface circulation in the Strait of Georgia, (Waldichuk, 1957; Waldichuk, 1958).

In 1953, for the first time in the Strait, current observations were made at 8 fixed locations in the Strait from an anchored ship (Waldichuk, 1957). They were generally taken at hourly intervals at selected depths for a period of one tidal day (25 hours) at each station. While surface currents were observed by means of a customary captive drift pole, subsurface currents were measured with an Ekman Current Meter.

A year later, a series of 6 stations was occupied between Tsawwassen and Galiano Island (Fig. 1) and surface and bottom currents were measured for one tidal day at each of the stations (Pickard, 1956). The surface currents were observed at half-hourly intervals utilizing a drift pole while the bottom currents were measured with an Ekman Current Meter at hourly intervals.

During the summer of 1963 a series of 3 stations in a line between Nanaimo and Sechelt (Fig. 1) was occupied by the Canadian Hydrographic Service and currents were measured at depths of 5, 100 and 300 metres (m) with self-recording BBT (Neyrpic) current metres (analogue output) at each of these stations at 20-minute intervals for period up to 30 days (Huggett, 1966). The method used to obtain the data represents a significant improvement over previous methods. However, even when currents were measured in this manner, the results indicated inconsistency in the day-to-day flow patterns although the 15-day averages did indicated the presence of clockwise rotary tidal currents.

LOCATION OF STATIONS

A line of 3 stations, H-06, H-16 and H-26, placed 10 kilometres (km) apart, was established between Valdes Island to the west and Point Grey to the east in April 1969 (Fig. 1). They remained stationed until the completion of the survey in September 1970. As is evident from Fig. 2, the western half of the line is deeper than the eastern side, the maximum depth being located a few kilometres east of Station H-06. The small ridge shown to the east of Station H-16 is part of a shoal having a minimum depth of 146m and situated within a few kilometres to the southeast of the ridge shown in the Figure.

The positions* and the depths of the 3 stations are:

H-06	Latitude 49°06.23'N Longitude 123° 33.70'W Depth 252m
H-16	Latitude 49° 09.07'N Longitude 123° 26.75'W Depth 295m
H-26	Latitude 49° 11.93'N Longitude 123° 19.80'W Depth 162m

* The exact locations of these stations are generally within one-half mile of those indicated above.

COMMENTS

Station H-06

Subsurface-Buoy Mooring

April 16 through April 22, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 100) 6-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 99) 6-day period. No comment.

Note: Surface buoy damaged by unspecified ship within 24 hours after mooring established. Subsurface buoy and current meters at depths of 50m and 200m unaffected. Current meters retrieved on April 22, but during recovery incurred damages to meters.

July 10 through August 28, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 100) 49-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 99) 49-day period. No comment.

August 28 through September 18, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 100) 21-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 99) 21-day period. No comment.

September 18 through October 16, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 100) 28-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 99) 28-day period. When current meter retrieved and inspected, found screw holding encoder loose.

October 16 through November 25, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 100) 40-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 99) 40-day period. No comment.

Note: Bathythermograph observation and hydrographic cast made at 1300 and 1310 respectively on November 25, 1969.

COMMENTS (cont'd)

November 25, 1969 through January 14, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 100) 50-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 99) 50-day period. No comment.

January 14 through February 19, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 100) 36-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 99) 36-day period. No comment.

Note: Bathythermograph observation and hydrographic cast made at 1305 on January 14, 1970.

February 19 through March 25, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 100) 34-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 99) 34-day period. No comment.

March 25 through April 27, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 100) Current meter leaked. Data available for only 4 hours - not included in this data report.
200m	Aanderaa Current Meter (Serial No. 99) 31-day period. Last two days of records "dirty" due to dragging when grapple hooked main line. Last reliable data April 25, 1970. Thermometer well and fin corroded.

Taut-rope Mooring

April 27 through June 8, 1970.

Instrument Depth: 3m	Aanderaa Current Meter (Serial No. 210) 42-day period. This meter lifted off water surface for 1 minute at 1115 on April 28, 1970 for inspection.
50m	Aanderaa Current Meter (Serial No. 211) 42-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 99) 42-day period. No comment.

COMMENTS (cont'd)

June 10 through July 27, 1969.

Instrument Depth: 3m	Geodyne*Current Meter (Serial No. M-228) Current meter did not produce any data.
50m	Aanderaa Current Meter (Serial No. 211) 47-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 210) 47-day period. No comment.

Note: 2 days gap between the beginning of this series of data and end of previous series.

July 27 through September 24, 1970.

Instrument Depth: 3m	Aanderaa Current Meter (Serial No. 101) 59-day period. No comment.
50m	Aanderaa Current Meter (Serial No. 102) 59-day period. No comment.

* It is to be noted that while the Aanderaa (Bergen) Current Meter used in the present program was made to sample every 10 minutes, the Geodyne Current Meter was set to "burst-sample" every 15 minutes (that is, every 15 minutes it recorded 15 samples at 5-second intervals).

ACKNOWLEDGEMENT

The acquisition of, and the processing of oceanographic data obtained from moored instruments require the assistance and cooperation of many individuals and groups. We acknowledge the assistance rendered by the staff of the Nanaimo Biological Station of the Fisheries Research Board of Canada, of the Pacific Oceanographic Group of the Marine Sciences Branch (now at the Pacific Environment Institute at West Vancouver, B.C.), of the Tidal and Current Survey of the Marine Sciences Branch and the officers and men of the research vessels, C.G.S. *Parizeau* (M.S.B.), C.G.S. *Vector* (M.S.B.) and C.G.S. *A.P. Knight* (F.R.B.C.). Individuals associated with the above were duly acknowledged in our first report. Since the publication of the first report in 1971, a number of people have assisted in the computer-processing of data and in the preparation of illustrations. We appreciate the generous assistance given by Mr. J.A.C. Thomson and Mrs. A. Sandnes of the Computing Centre at the Nanaimo Biological Station, Messrs. B. de Lange Boom and I. Daniel who processed the data, Miss T.A. Findlay who prepared the illustrations, and Mr. C. Morley of the Nanaimo Biological Station and Mr. R. Banyard of the Canadian Hydrographic Service of the Marine Sciences Branch who photo-reproduced all the illustrations. We owe our thanks to Miss M. Dyer for organizing and making the preparatory work essential to the publication of this report.

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1958. Drift bottle observations in the Strait of Georgia. J. Fish. Res. Bd. Canada 15: 1065-1102.

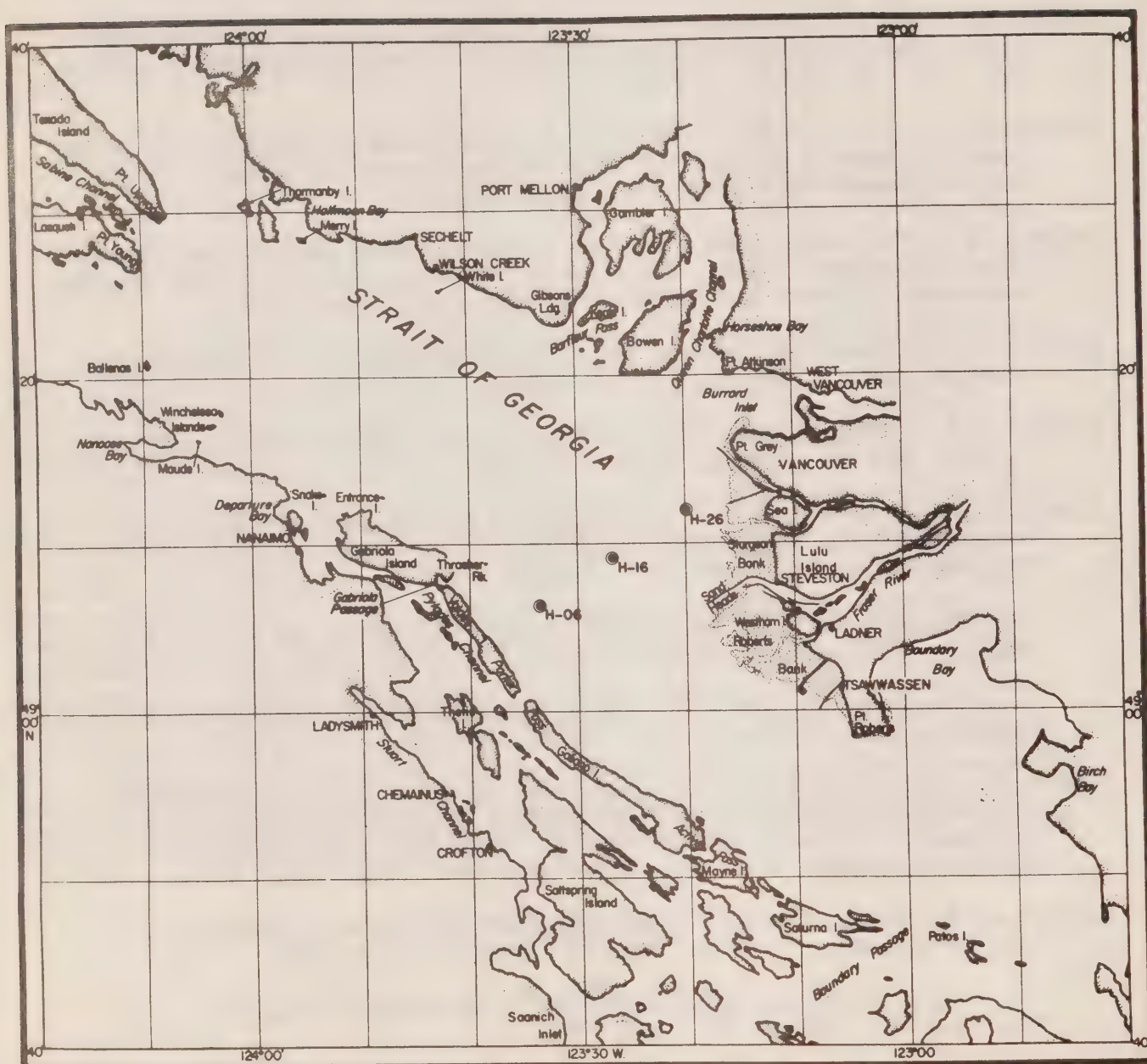


Fig. 1. Location of stations in the central Strait of Georgia where observations were made. The records described in this report were obtained at Station H-06.

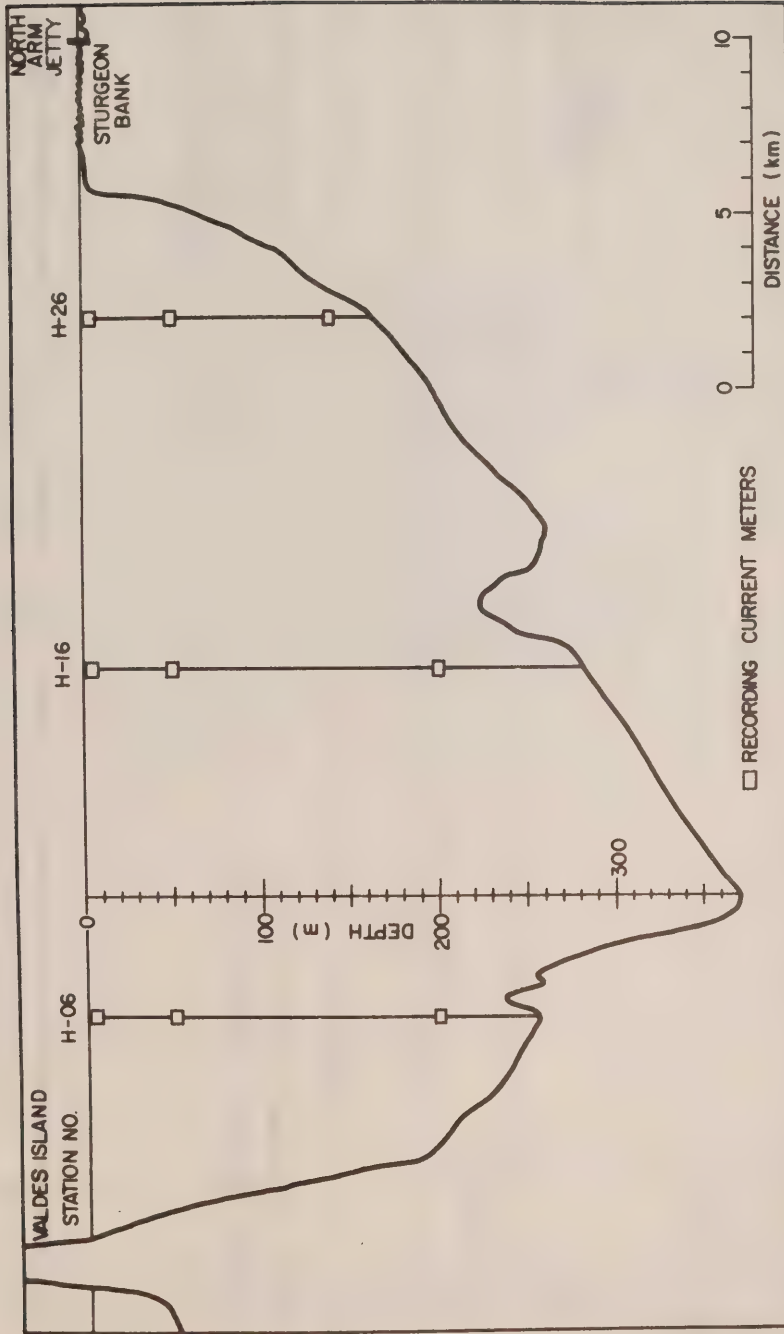


Fig. 2. Cross-section along the line of stations H-06, H-16 and H-26, between Valdes Island and Point Grey. The records described in this report were obtained at Station H-06.

1970

1969

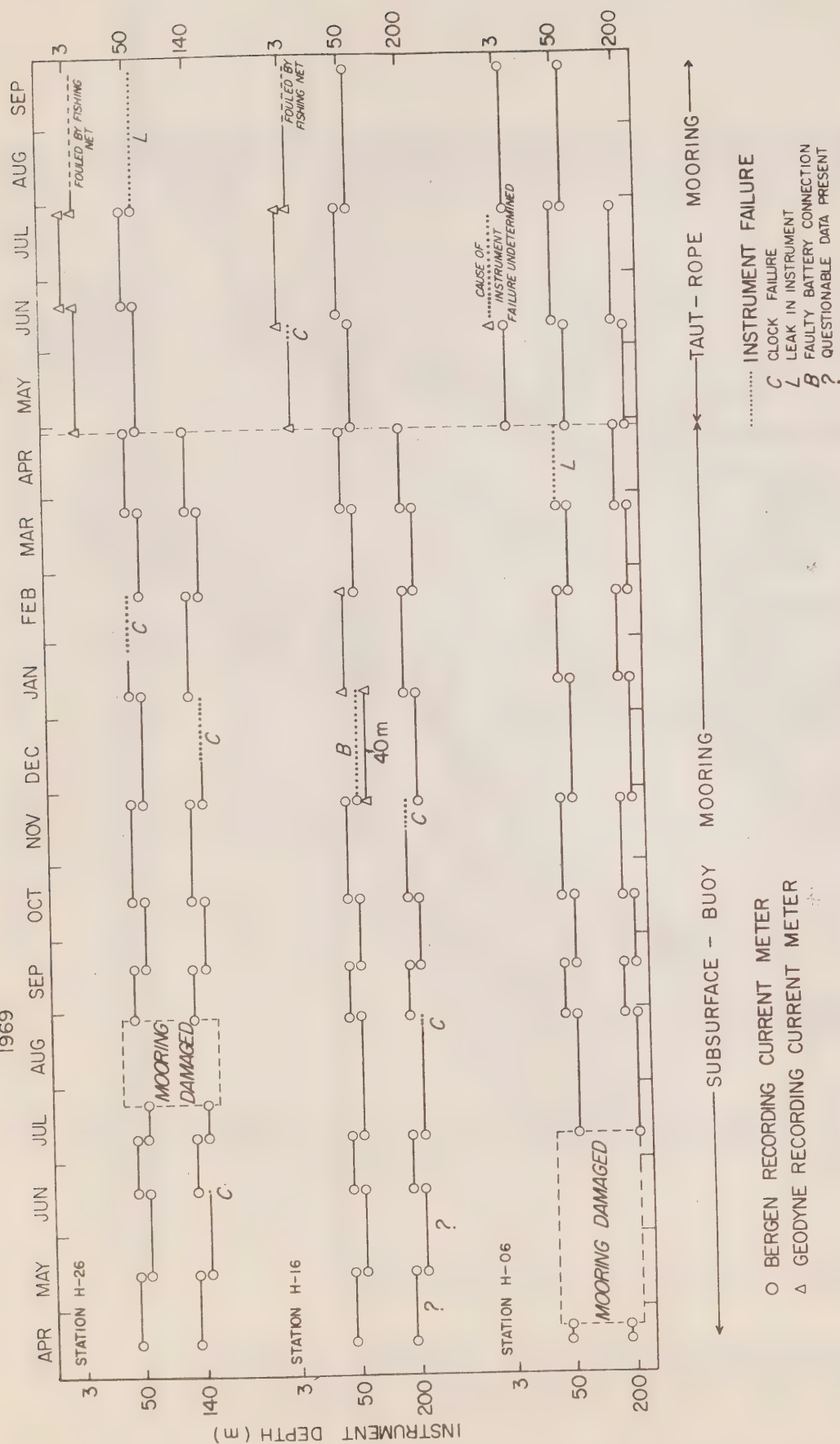


Fig. 3. Schematic drawing showing summary of events that occurred during the program of observations during 1969-1970. The records described in this report were obtained at Station H-06.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 3 METRES
OBSERVATION PERIOD, FROM 14. 5/27/ 4/70 TO 14. 0/ 8/ 6/70

MEAN SPEED	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
0	0	0										
20	6	0 0*										
40	0	0 0										
60	1	0 0										
80	0	0 0										
100	0	0 0										
120	1	0 0										
140	7	0 0*										
160	28	0 0*****										
180	35	1 0*****										
200	61	1 0*****										
220	56	1 0*****										
240	92	2 0*****										
260	146	2 0*****										
280	151	2 0*****										
300	209	3 0*****										
320	215	4 0*****										
340	241	4 0*****										
360	276	5 0*****										
380	255	4 0*****										
400	273	5 0*****										
420	217	4 0*****										
440	214	4 0*****										
460	202	3 0*****										
480	185	3 0*****										
500	184	3 0*****										
520	197	3 0*****										
540	253	4 0*****										
560	225	4 0*****										
580	260	4 0*****										
600	252	4 0*****										
620	254	4 0*****										
640	247	4 0*****										
660	224	4 0*****										
680	208	3 0*****										
700	116	2 0*****										
720	133	2 0*****										
740	97	2 0*****										
760	90	1 0*****										
780	77	1 0*****										
800	61	1 0*****										
820	40	1 0*****										
840	40	1 0*****										
860	27	0 0*****										
880	35	1 0*****										
900	35	1 0*****										
920	15	0 0****										
940	15	0 0****										
960	24	0 0****										
980	11	0 0**										
1000	10	0 0**										
1020	14	0 0***										
1040	7	0 0*										
1060	11	0 0**										
1080	3	0 0*										
1100	1	0 0										
1120	1	0 0										
1140	1	0 0										
1160	0	0 0										
1180	1	0 0										

NUMBER OF SPEEDS GREATER THAN 1180 = 0

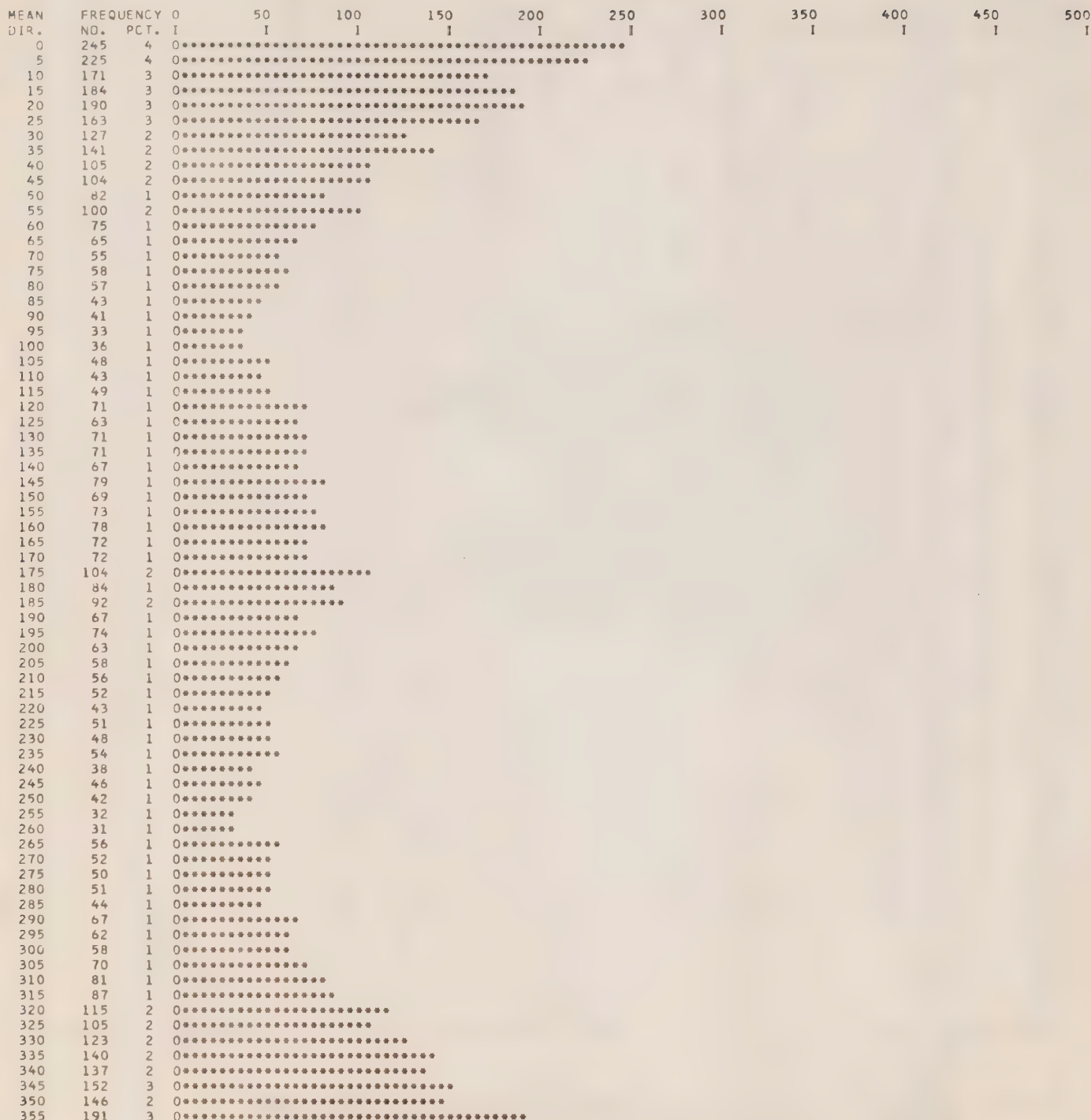
NUMBER OF OBSERVATIONS = 6048

MEAN SPEED = 509 MM/SEC

FIG. 4A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970, SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 3 METRES
OBSERVATION PERIOD, FROM 14. 5/27/ 4/70 TO 14. 0/ 8/ 6/70



NUMBER OF OBSERVATIONS = 6048

FIG. 4B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 3 M. FROM 14. 5/27/ 4/70 TO 14. 0/ 8/ 6/70

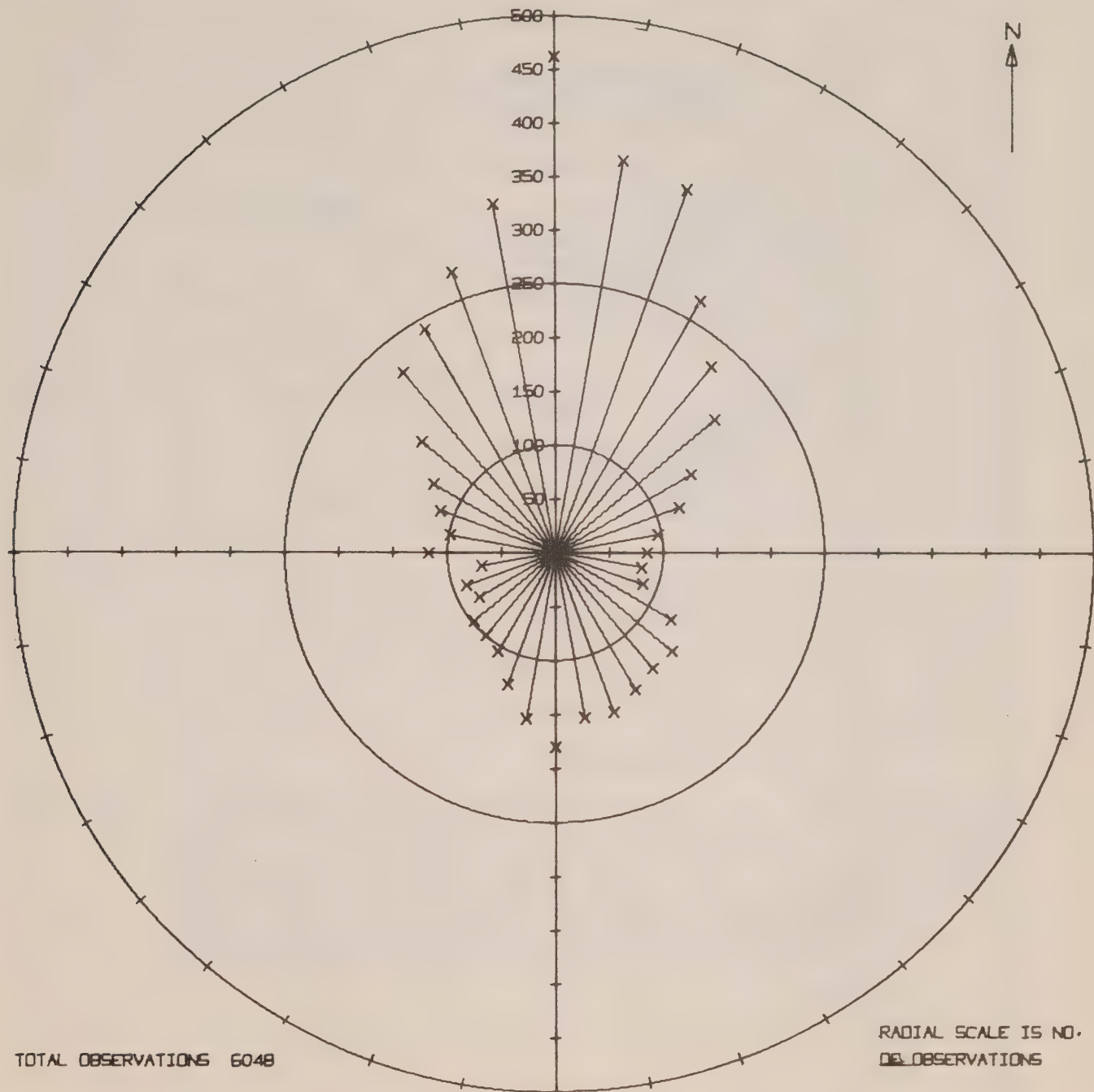


FIG. 4c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° ,
BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING
APRIL 27 THROUGH JUNE 8, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 3 METERS
OBSERVATION PERIOD, FROM 14. 5/27/ 4/70 TO 14. 0/ 8/ 6/70

TEMP.	FREQUENCY	PERCENT	1	2	4	6	8	10	12	14	16	18	20
TEMP.	NO.	PCT.	1	2	4	6	8	10	12	14	16	18	20
7.70	0	0											
7.75	2	0.03											
7.80	9	0.12											
7.85	4	0.05											
7.90	3	0.04											
7.95	7	0.09											
8.00	9	0.12											
8.05	16	0.21											
8.10	15	0.20											
8.15	84	1.10											
8.20	111	1.44											
8.25	74	0.96											
8.30	131	1.71											
8.35	116	1.51											
8.40	177	2.30											
8.45	153	1.98											
8.50	37	0.48											
8.55	112	1.45											
8.60	120	1.56											
8.65	48	0.62											
8.70	43	0.56											
8.75	75	0.97											
8.80	69	0.90											
8.85	74	0.96											
8.90	145	1.88											
8.95	58	0.75											
9.00	121	1.57											
9.05	109	1.41											
9.10	91	1.18											
9.15	59	0.76											
9.20	88	1.14											
9.25	96	1.25											
9.30	43	0.56											
9.35	58	0.75											
9.40	67	0.87											
9.45	44	0.57											
9.50	40	0.52											
9.55	65	0.84											
9.60	36	0.46											
9.65	66	0.86											
9.70	61	0.79											
9.75	106	1.38											
9.80	85	1.10											
9.85	47	0.61											
9.90	114	1.48											
9.95	65	0.84											
10.00	46	0.59											
10.05	71	0.91											
10.10	57	0.73											
10.15	59	0.76											
10.20	40	0.52											
10.25	48	0.62											
10.30	109	1.41											
10.35	116	1.51											
10.40	66	0.86											
10.45	120	1.56											
10.50	115	1.49											
10.55	89	1.15											
10.60	133	1.72											
10.65	125	1.62											
10.70	86	1.11											
10.75	118	1.53											
10.80	87	1.12											
10.85	99	1.28											
10.90	112	1.45											
10.95	57	0.73											
11.00	79	1.02											
11.05	102	1.32											
11.10	82	1.06											
11.15	91	1.18											
11.20	55	0.71											
11.25	24	0.31											
11.30	17	0.22											
11.35	14	0.18											
11.40	24	0.31											
11.45	7	0.09											
11.50	3	0.04											
11.55	9	0.11											
11.60	17	0.22											
11.65	23	0.30											
11.70	32	0.41											
11.75	53	0.69											
11.80	41	0.53											
11.85	82	1.06											
11.90	42	0.55											
11.95	50	0.65											
12.00	35	0.45											
12.05	16	0.21											
12.10	22	0.28											
12.15	28	0.36											
12.20	11	0.14											
12.25	8	0.10											
12.30	4	0.05											
12.35	1	0.01											
12.40	5	0.06											
12.45	5	0.06											
12.50	2	0.03											
12.55	7	0.09											

NUMBER OF TEMP. GREATER THAN 16.90 = 27

NUMBER OF OBSERVATIONS = 6048

MEAN TEMP = 11.42 DEG. C.

FIG. 4b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970.

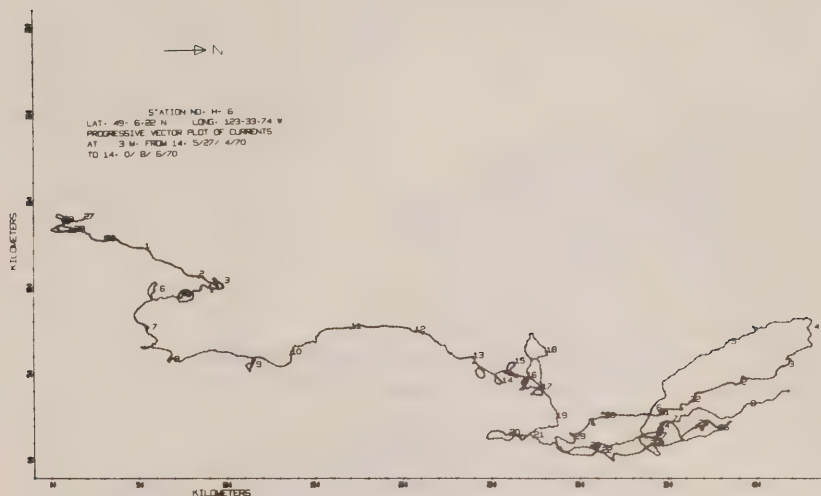


Fig. 4e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 42-day period during April 27 through June 8, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

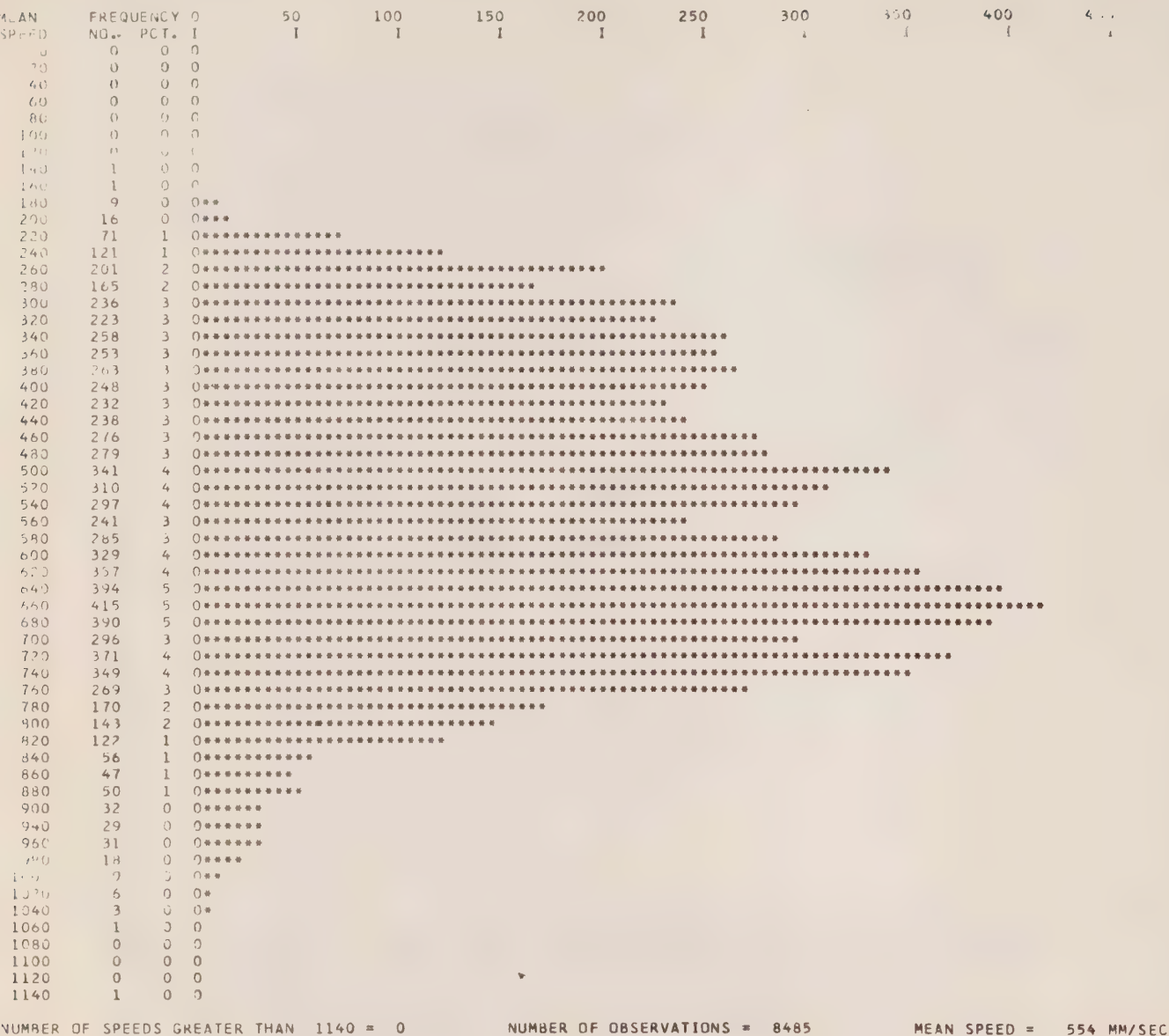
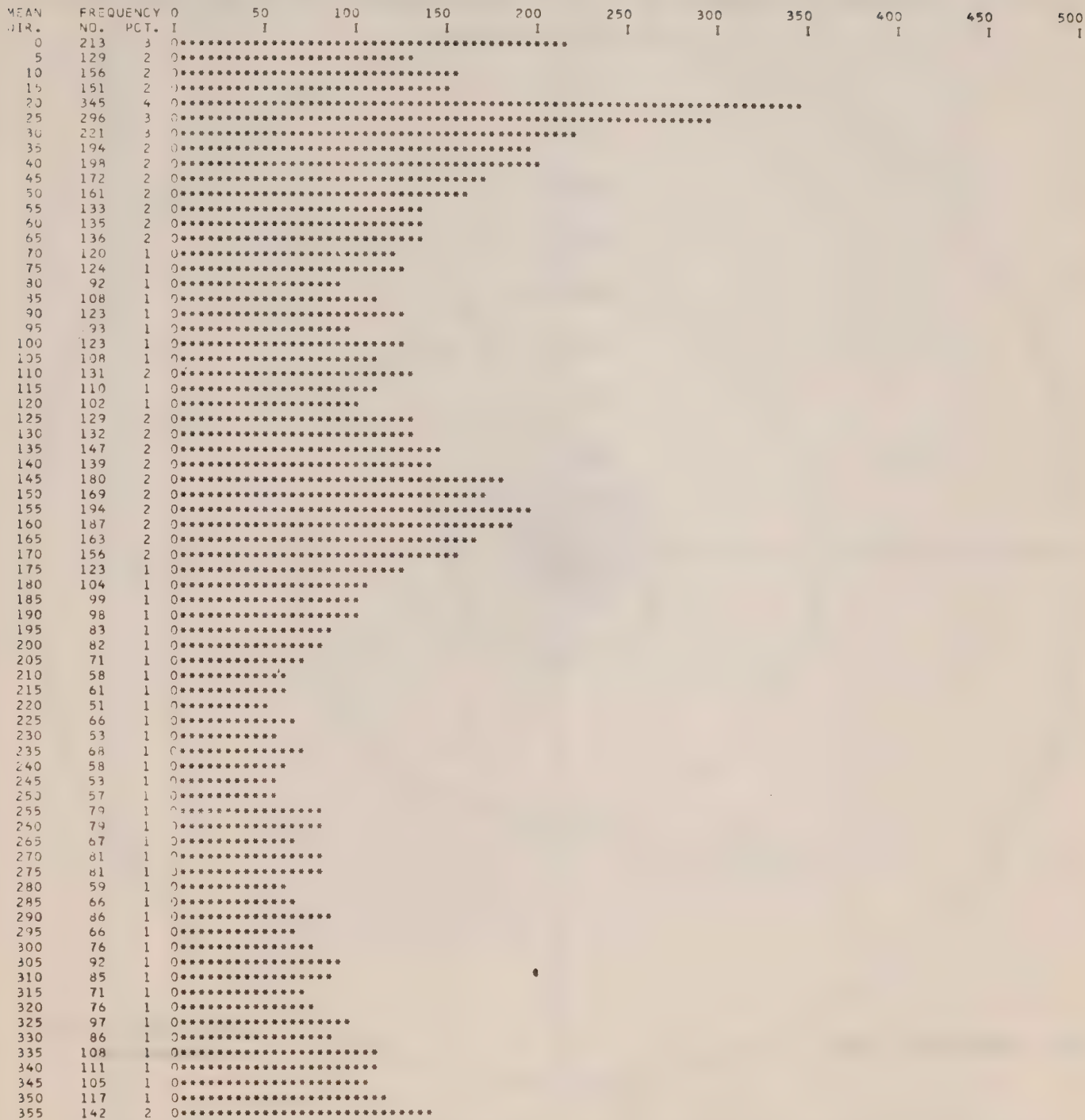
HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 3 METRES
OBSERVATION PERIOD, FROM 16.14/27/ 7/70 TO 14.28/24/ 9/70

FIG. 5A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 59-DAY PERIOD DURING JULY 27 THROUGH SEPTEMBER 24, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 3 METRES
OBSERVATION PERIOD, FROM 16.14/27/ 7/70 TO 14.28/24/ 9/70



NUMBER OF OBSERVATIONS = 8485

FIG. 5b.

A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 59-DAY PERIOD DURING JULY 27 THROUGH SEPTEMBER 24, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 3 M. FROM 16.14/27/ 7/70 TO 14.28/24/ 9/70

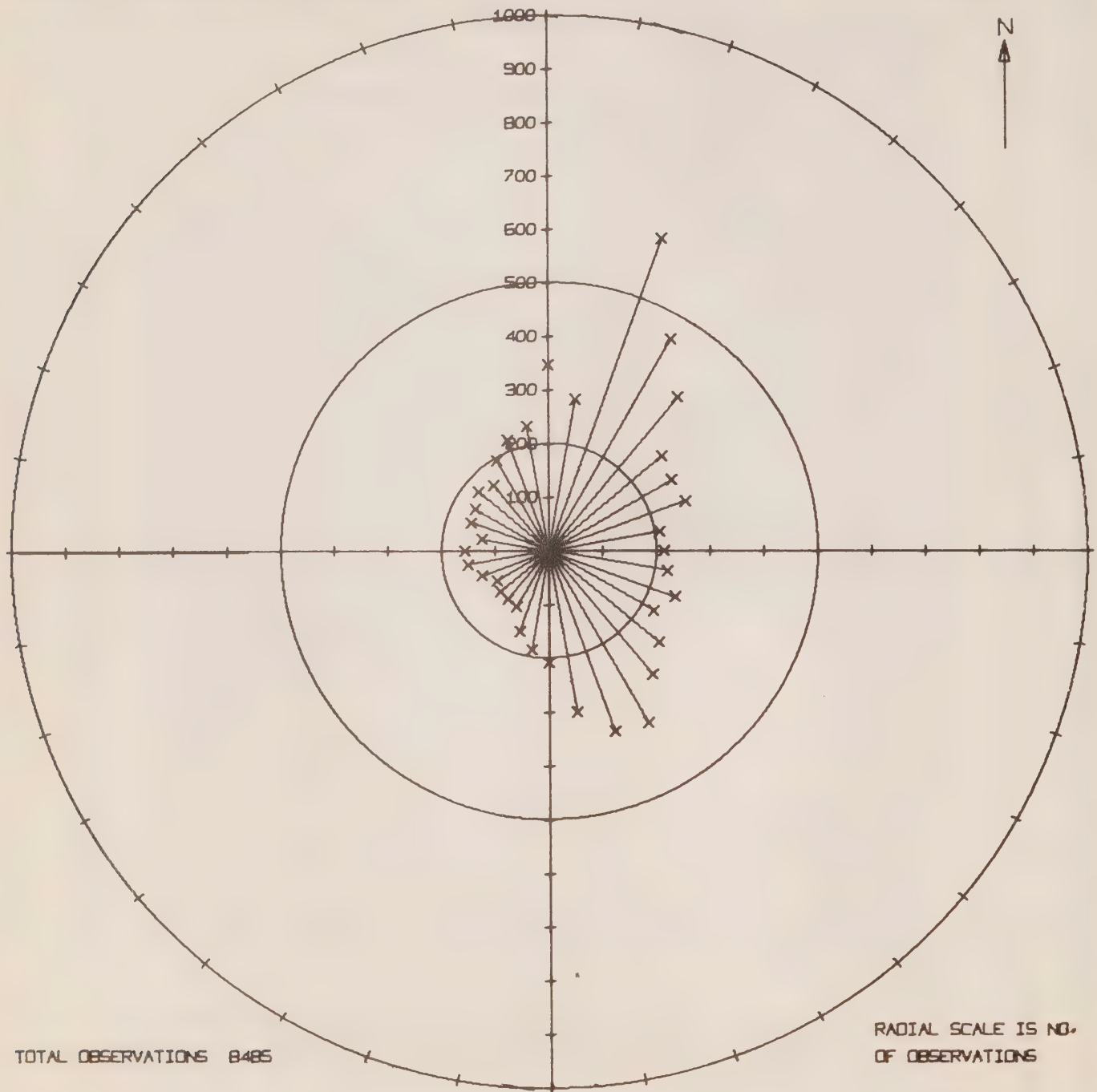
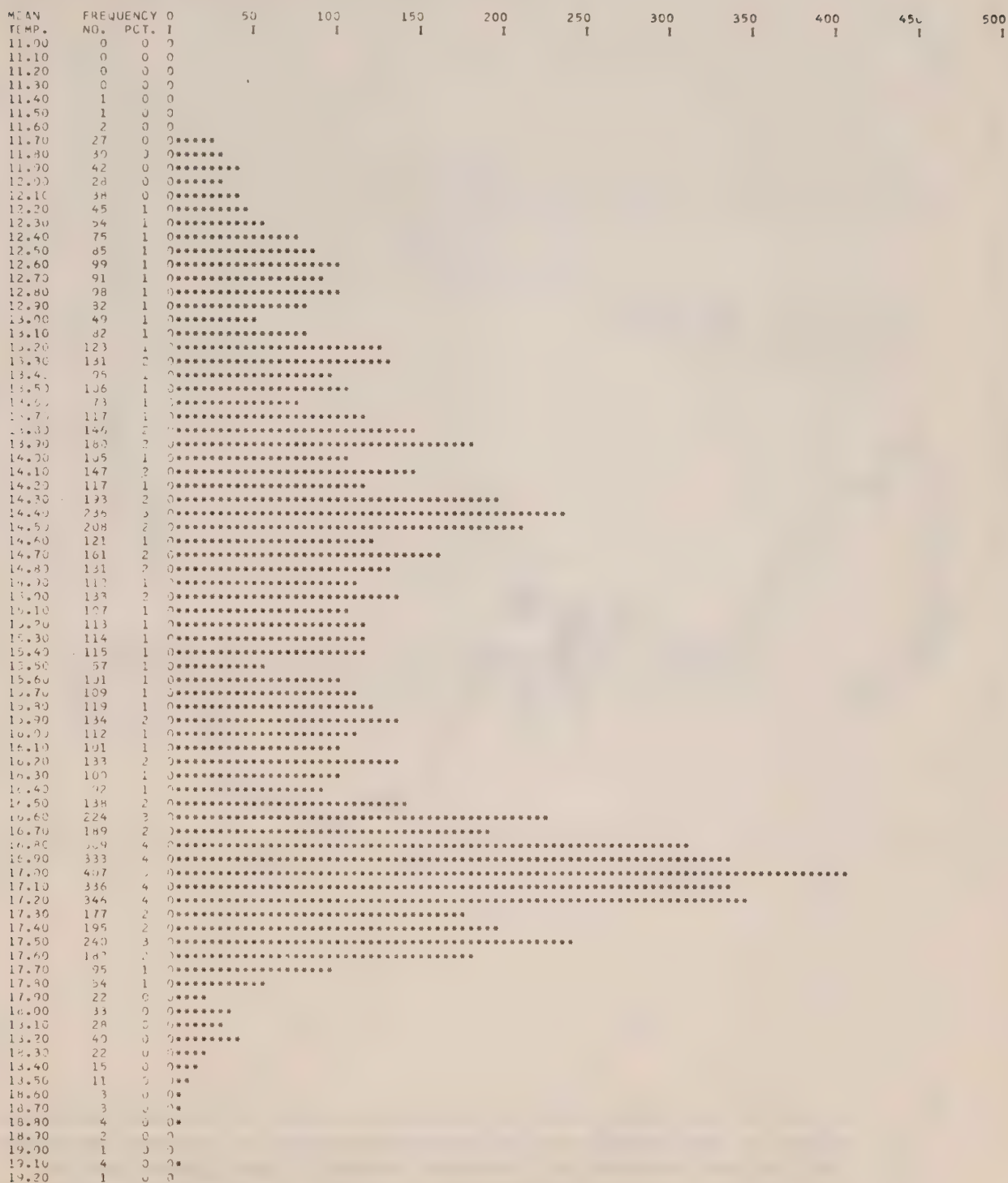


FIG. 5c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° ,
BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 59-DAY PERIOD DURING
JULY 27 THROUGH SEPTEMBER 24, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 3 METERS
OBSERVATION PERIOD, FROM 16.14/27/ 7/70 TO 14.28/24/ 9/70



NUMBER OF TEMP. GREATER THAN 19.20 = 0

NUMBER OF OBSERVATIONS = 8485

MEAN TEMP = 15.46 DEG. C.

FIG. 5d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 59-DAY PERIOD DURING JULY 27 THROUGH SEPTEMBER 24, 1970.

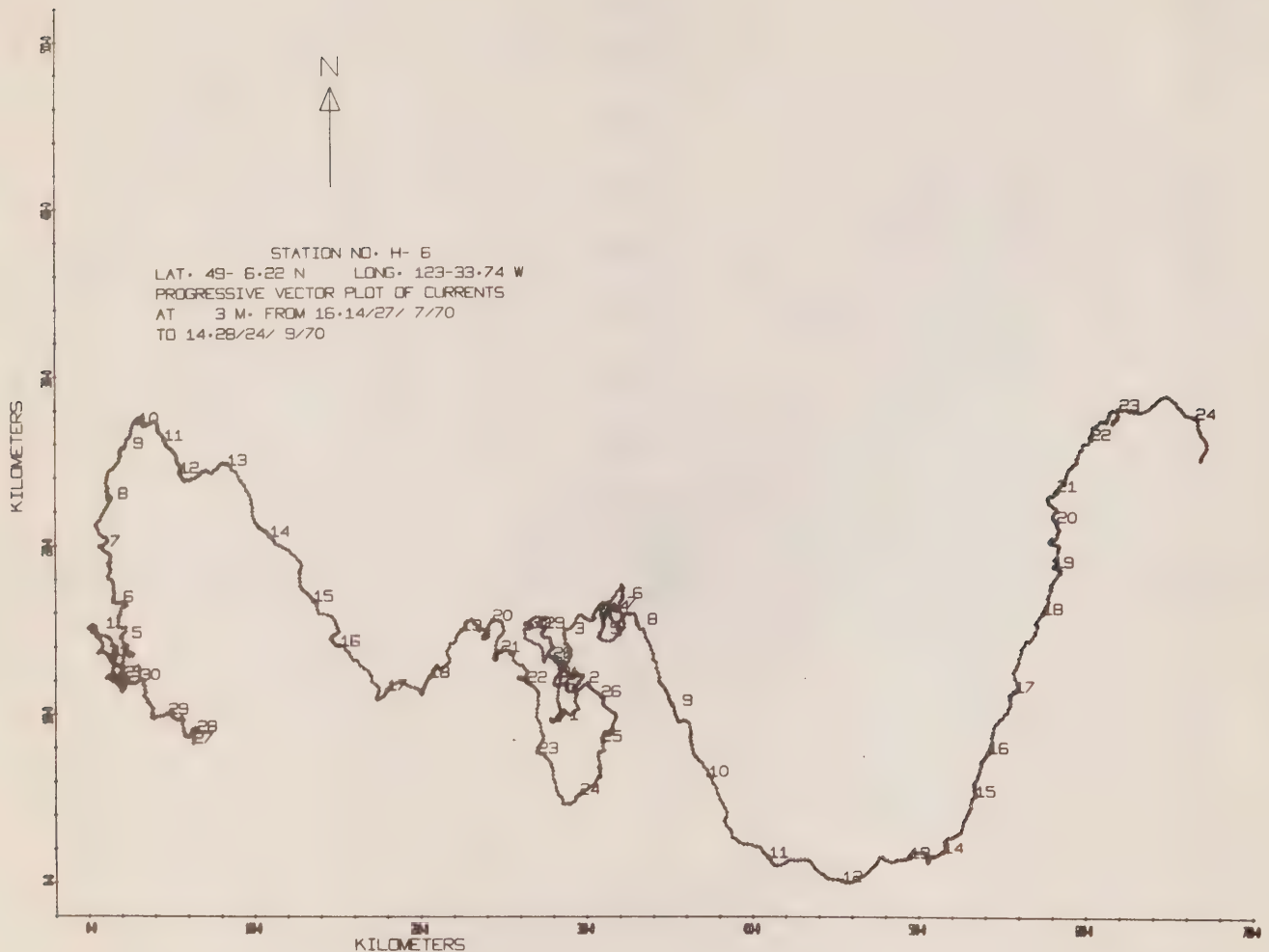


Fig. 5e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 59-day period during July 27 through September 24, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 13.55/16/ 4/69 TO 15.45/22/ 4/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	10	20	30	40	50	60	70	80	90	100
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	33	4	0*****										
20	29	3	0*****										
30	13	1	0*****										
40	63	7	0*****										
50	42	5	0*****										
60	89	10	0*****										
70	48	5	0*****										
80	90	10	0*****										
90	59	7	0*****										
100	37	4	0*****										
110	60	7	0*****										
120	41	5	0*****										
130	60	7	0*****										
140	28	3	0*****										
150	36	4	0*****										
160	13	1	0*****										
170	17	2	0*****										
180	19	2	0*****										
190	14	2	0*****										
200	19	2	0*****										
210	10	1	0*****										
220	25	3	0*****										
230	7	1	0*****										
240	12	1	0*****										
250	5	1	0*****										
260	2	0	0**										
270	3	0	0**										
280	1	0	0*										
290	1	0	0*										

NUMBER OF SPEEDS GREATER THAN 290 = 0

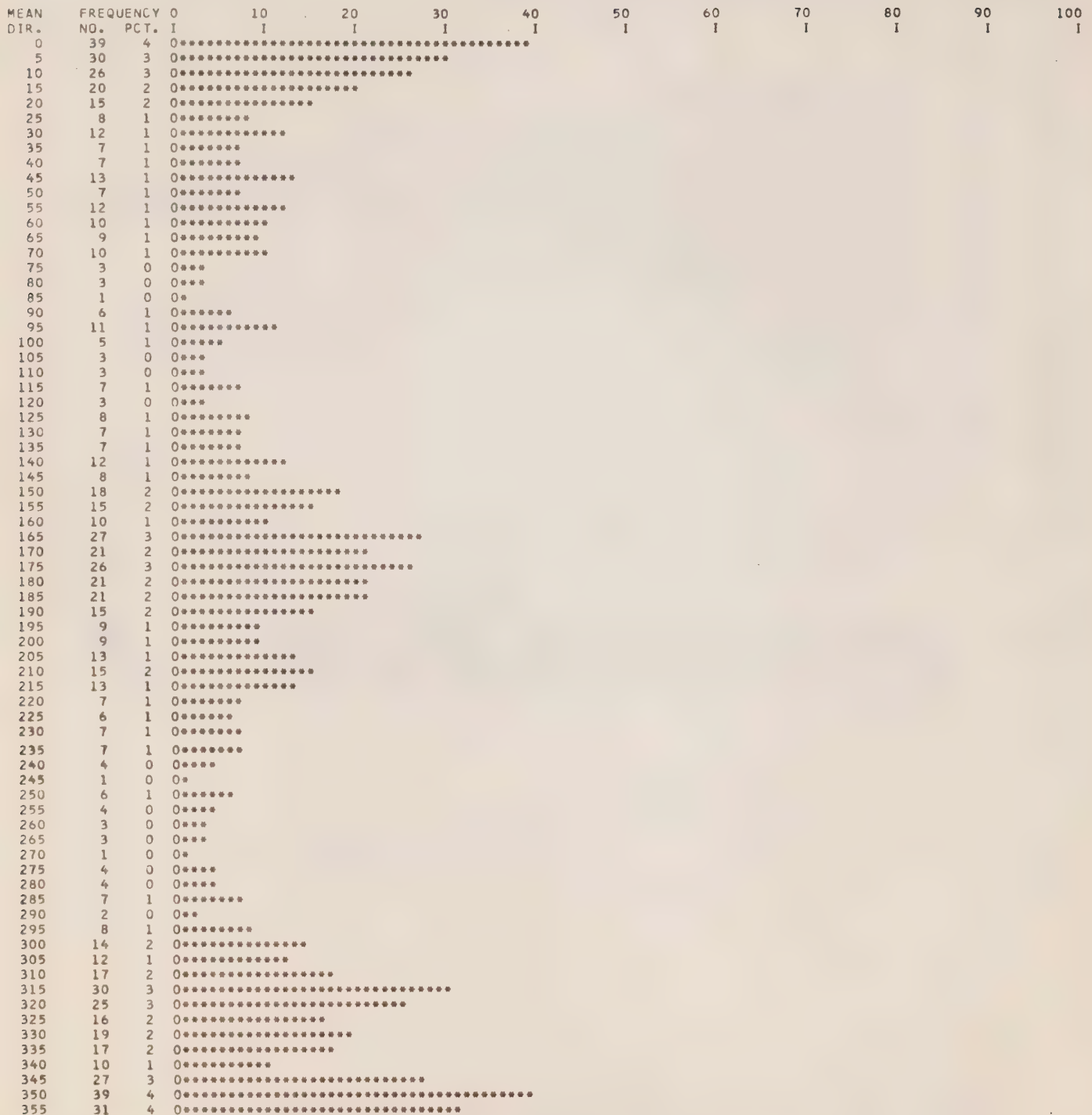
NUMBER OF OBSERVATIONS = 876

MEAN SPEED = 102 MM/SEC

FIG. 6A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969, SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 13.55/16/ 4/69 TO 15.45/22/ 4/69



NUMBER OF OBSERVATIONS = 876

FIG. 6B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 13.55/16/ 4/69 TO 15.45/22/ 4/69

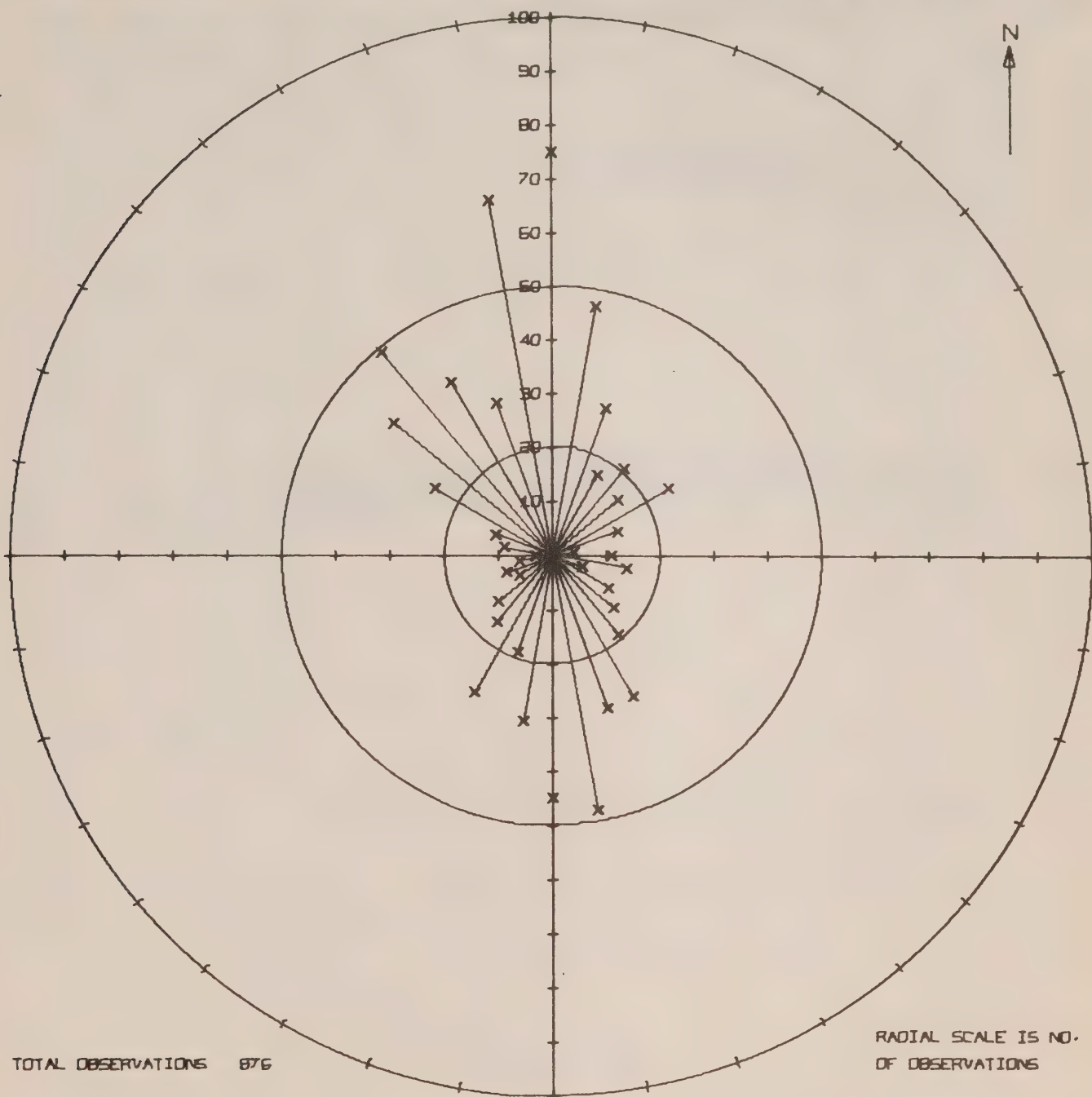


FIG. 6c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 13.55/16/ 4/69 TO 15.45/22/ 4/69

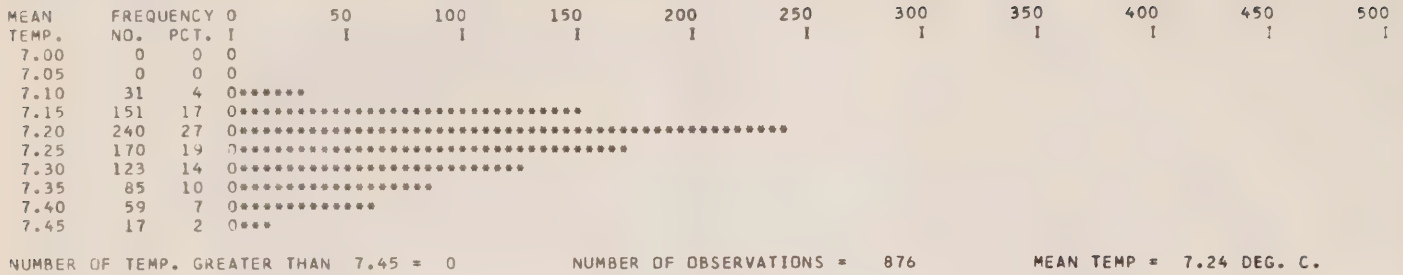


FIG. 6d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969.

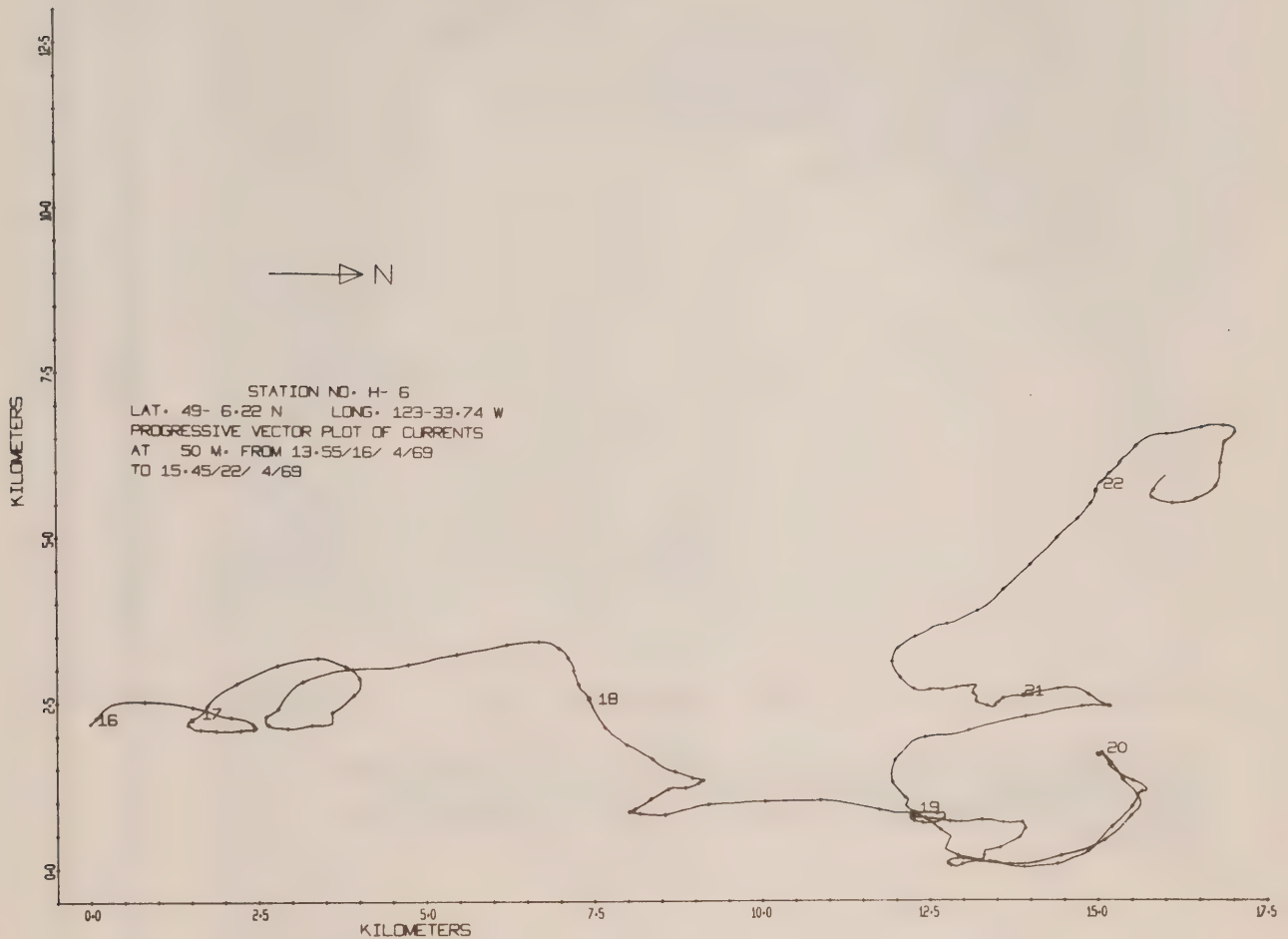


Fig. 6e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 6-day period during April 16 through April 22, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9. 5/10/ 7/69 TO 16.15/28/ 8/69

MEAN SPEED	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	0	0	0									
10	240	3	0	*****								
20	162	2	0	*****								
30	185	3	0	*****								
40	387	5	0	*****								
50	325	5	0	*****								
60	533	8	0	*****								
70	403	6	0	*****								
80	637	9	0	*****								
90	453	6	0	*****								
100	407	6	0	*****								
110	576	8	0	*****								
120	396	6	0	*****								
130	470	7	0	*****								
140	266	4	0	*****								
150	319	4	0	*****								
160	177	2	0	*****								
170	161	2	0	*****								
180	210	3	0	*****								
190	124	2	0	*****								
200	115	2	0	*****								
210	76	1	0	*****								
220	94	1	0	*****								
230	61	1	0	*****								
240	55	1	0	*****								
250	52	1	0	*****								
260	35	0	0	****								
270	29	0	0	***								
280	25	0	0	***								
290	28	0	0	***								
300	16	0	0	**								
310	6	0	0	*								
320	10	0	0	*								
330	1	0	0									
340	3	0	0									
350	1	0	0									
360	0	0	0									
370	0	0	0									
380	0	0	0									
390	0	0	0									
400	1	0	0									
410	1	0	0									

NUMBER OF SPEEDS GREATER THAN 410 = 0

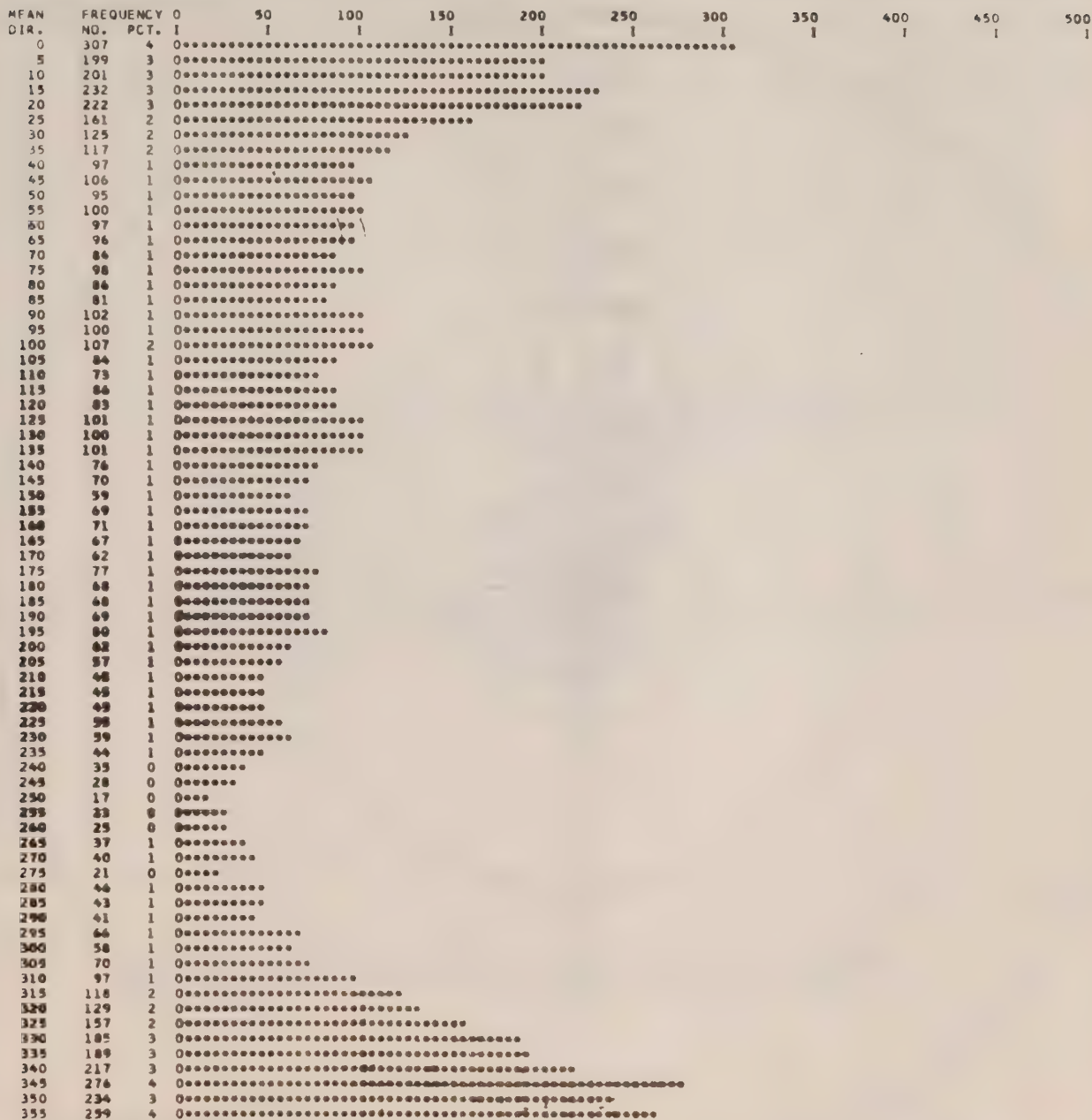
NUMBER OF OBSERVATIONS = 7100

MEAN SPEED = 107 MM/SEC

FIG. 7A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9. 5/10/ 7/69 TO 16.15/20/ 8/69



NUMBER OF OBSERVATIONS = 7100

FIG. 7a. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 9. 5/10/ 7/69 TO 16.15/28/ 8/69

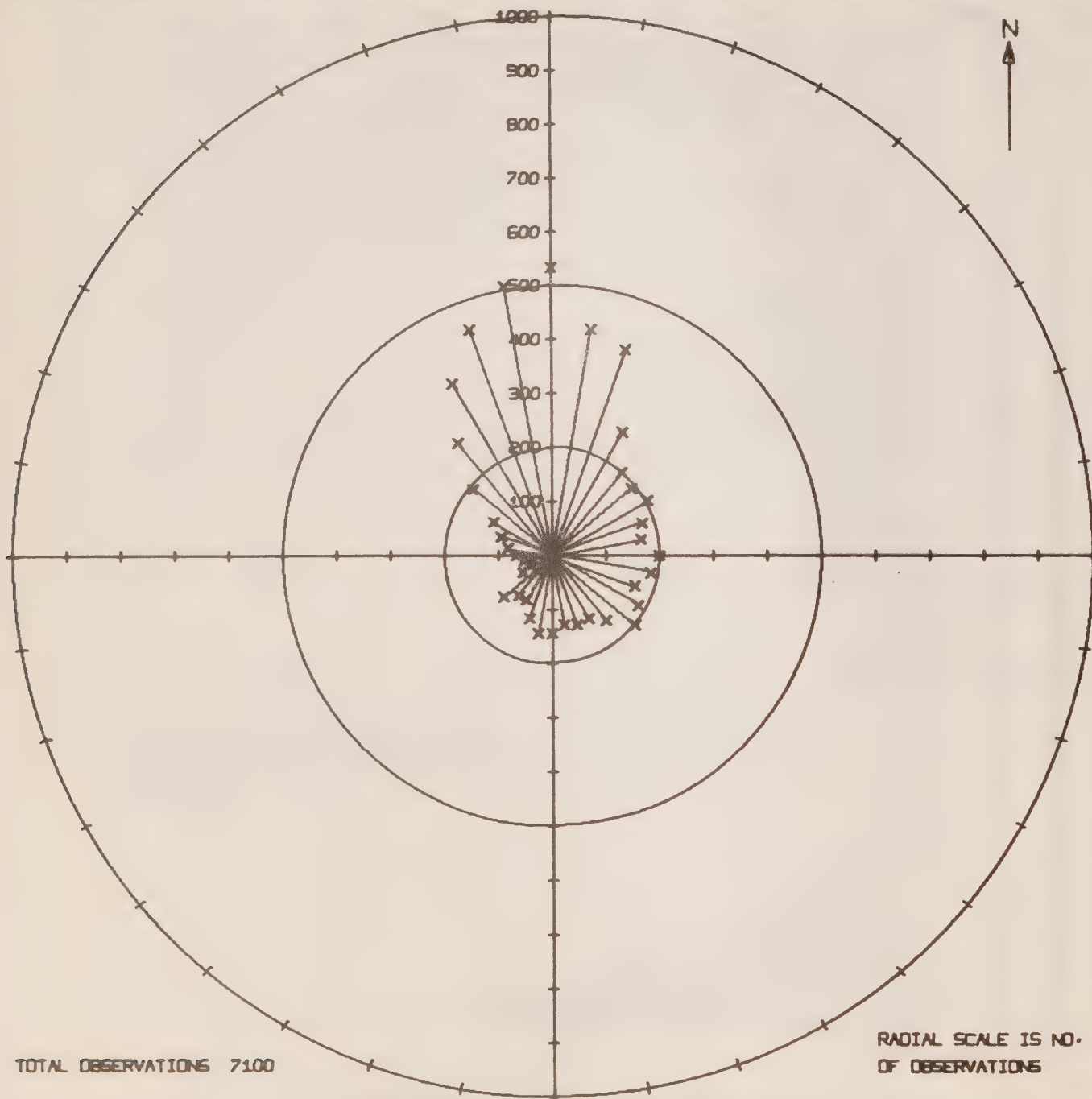


FIG. 7c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° ,
BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING
JULY 10 THROUGH AUGUST 28, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 9. 5/10/ 7/69 TO 16.15/28/ 8/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	0	100	200	300	400	500	600	700	800	900	1000
			I	I	I	I	I	I	I	I	I	I	I
8.00	0	0	0										
8.05	0	0	0										
8.10	0	0	0										
8.15	0	0	0										
8.20	0	0	0										
8.25	0	0	0										
8.30	0	0	0										
8.35	0	0	0										
8.40	0	0	0										
8.45	0	0	0										
8.50	0	0	0										
8.55	0	0	0										
8.60	0	0	0										
8.65	4	0	0										
8.70	9	0	0*										
8.75	118	2	0*****										
8.80	97	1	0*****										
8.85	750	11	0*****										
8.90	696	10	0*****										
8.95	675	10	0*****										
9.00	549	8	0*****										
9.05	209	3	0*****										
9.10	188	3	0*****										
9.15	267	4	0*****										
9.20	318	4	0*****										
9.25	333	5	0*****										
9.30	263	4	0*****										
9.35	267	4	0*****										
9.40	254	4	0*****										
9.45	281	4	0*****										
9.50	351	5	0*****										
9.55	292	4	0*****										
9.60	229	3	0*****										
9.65	196	3	0*****										
9.70	154	2	0*****										
9.75	140	2	0*****										
9.80	73	1	0*****										
9.85	36	1	0****										
9.90	143	2	0*****										
9.95	81	1	0*****										
10.00	28	0	0***										
10.05	39	1	0****										
10.10	34	0	0***										
10.15	16	0	0**										
10.20	10	0	0*										

NUMBER OF TEMP. GREATER THAN 10.20 = 0

NUMBER OF OBSERVATIONS = 7100

MEAN TEMP = 9.22 DEG. C.

FIG. 7d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969.

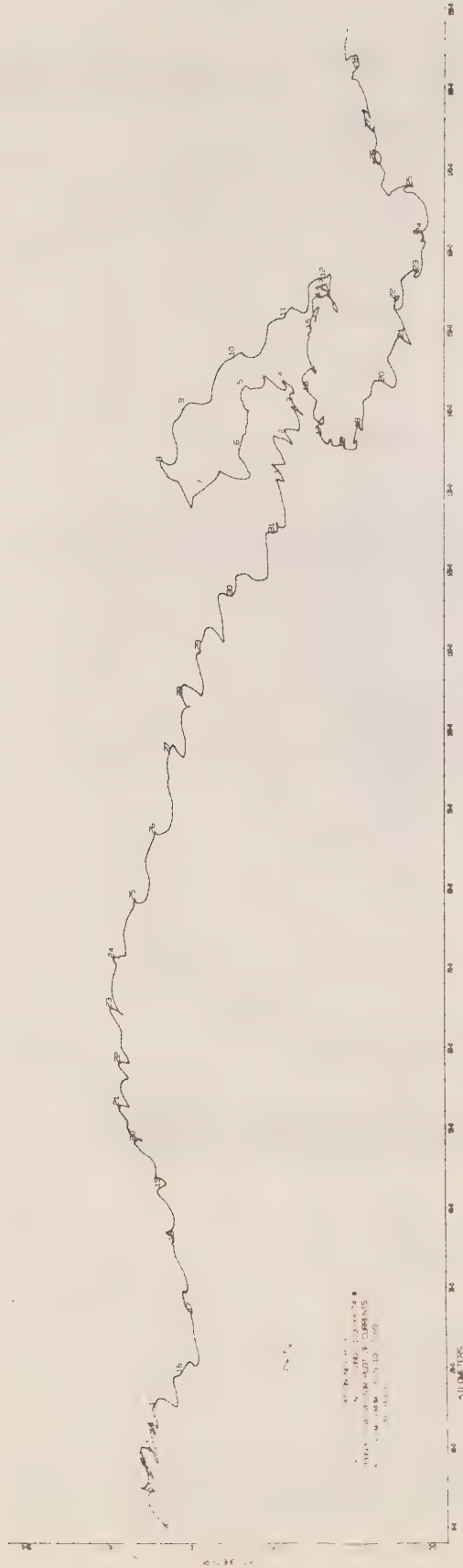


Fig. 7e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 49-day period during July 10 through August 28, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 18.35/28/ 8/69 TO 15.37/18/ 9/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
0	0	0	0										
10	71	2	0	*****									
20	70	2	0	*****									
30	95	3	0	*****									
40	147	5	0	*****									
50	139	5	0	*****									
60	238	8	0	*****									
70	176	6	0	*****									
80	283	9	0	*****									
90	174	6	0	*****									
100	172	6	0	*****									
110	245	8	0	*****									
120	155	5	0	*****									
130	238	8	0	*****									
140	139	5	0	*****									
150	180	6	0	*****									
160	75	3	0	*****									
170	73	2	0	*****									
180	96	3	0	*****									
190	58	2	0	*****									
200	75	2	0	*****									
210	41	1	0	*****									
220	32	1	0	*****									
230	8	0	0**										
240	2	0	0										
250	6	0	0*										

NUMBER OF SPEEDS GREATER THAN 250 = 0

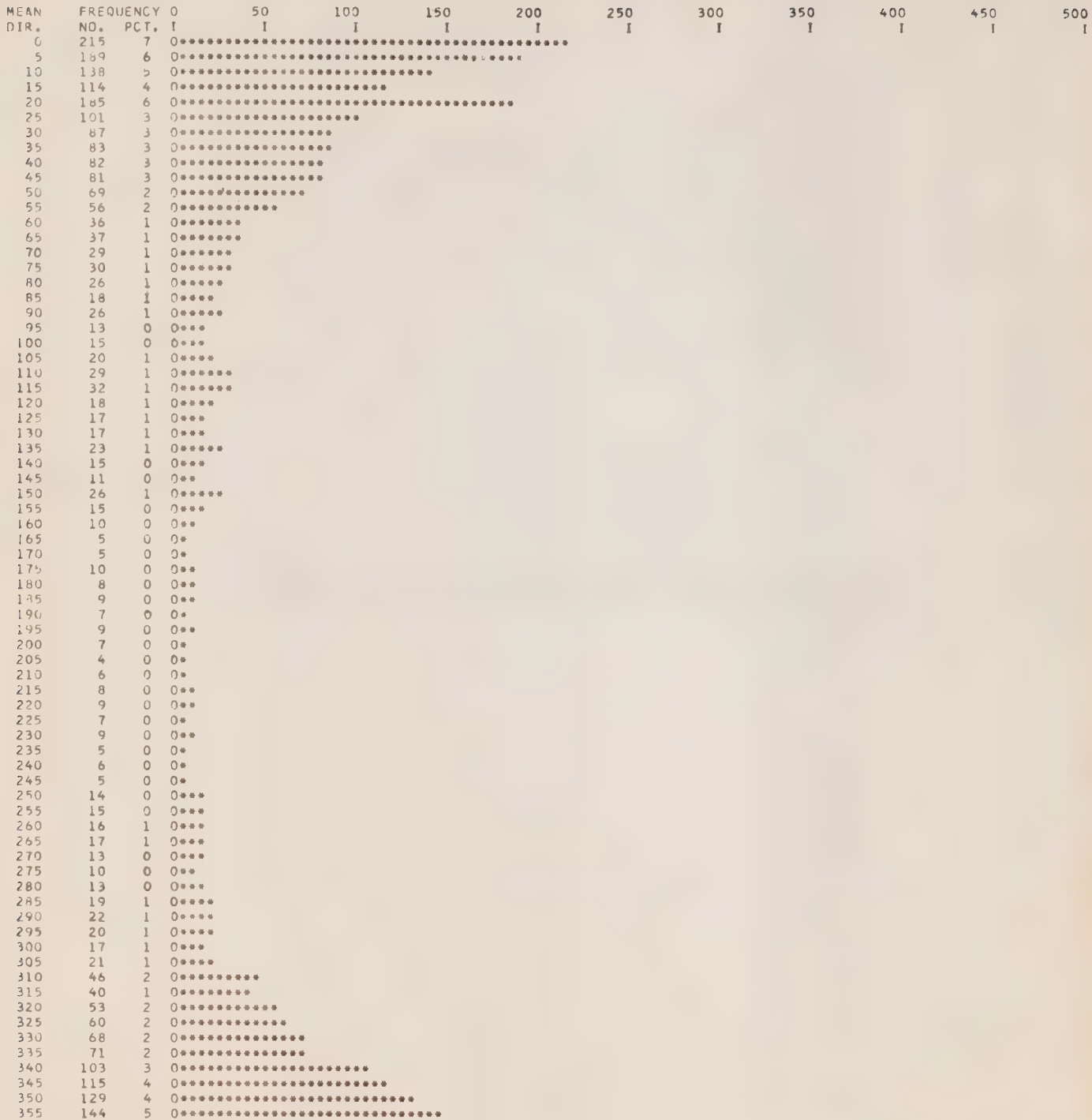
NUMBER OF OBSERVATIONS = 3006

MEAN SPEED = 104 MM/SEC

FIG. 8A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 18.35/28/ 8/69 TO 15.37/18/ 9/69



NUMBER OF OBSERVATIONS = 3008

FIG. 8B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 18.35/28/ 8/69 TO 15.37/18/ 9/69

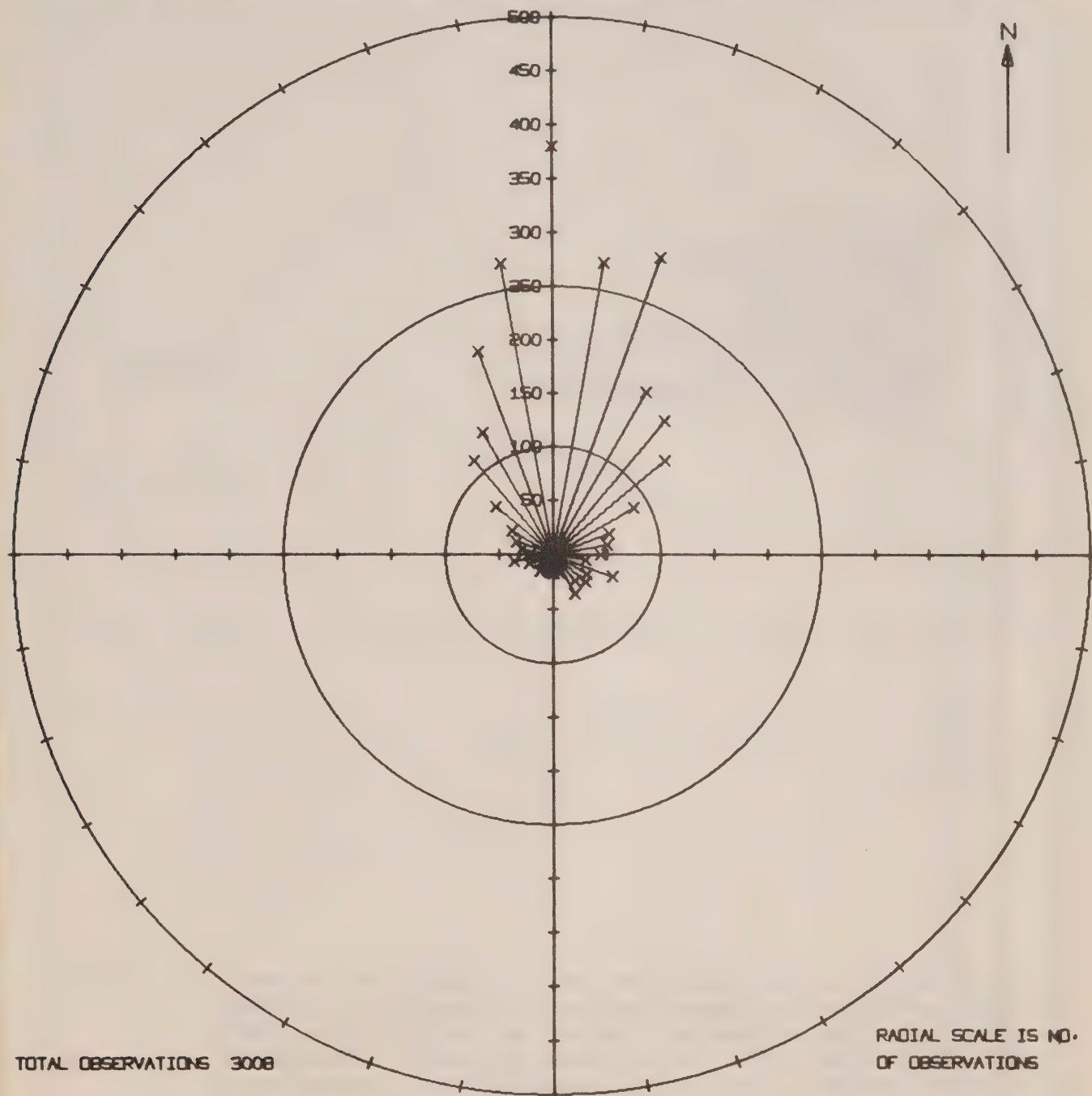


FIG. 8c.

A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 18.35/28/ 8/69 TO 15.37/18/ 9/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
8.00	0	0	0	0	0	0	0	0	0	0	0	0
8.05	0	0	0	0	0	0	0	0	0	0	0	0
8.10	0	0	0	0	0	0	0	0	0	0	0	0
8.15	0	0	0	0	0	0	0	0	0	0	0	0
8.20	0	0	0	0	0	0	0	0	0	0	0	0
8.25	0	0	0	0	0	0	0	0	0	0	0	0
8.30	0	0	0	0	0	0	0	0	0	0	0	0
8.35	0	0	0	0	0	0	0	0	0	0	0	0
8.40	0	0	0	0	0	0	0	0	0	0	0	0
8.45	0	0	0	0	0	0	0	0	0	0	0	0
8.50	0	0	0	0	0	0	0	0	0	0	0	0
8.55	0	0	0	0	0	0	0	0	0	0	0	0
8.60	0	0	0	0	0	0	0	0	0	0	0	0
8.65	0	0	0	0	0	0	0	0	0	0	0	0
8.70	0	0	0	0	0	0	0	0	0	0	0	0
8.75	0	0	0	0	0	0	0	0	0	0	0	0
8.80	0	0	0	0	0	0	0	0	0	0	0	0
8.85	0	0	0	0	0	0	0	0	0	0	0	0
8.90	6	0	0	0	0	0	0	0	0	0	0	0
8.95	65	2	0	0	0	0	0	0	0	0	0	0
9.00	103	3	0	0	0	0	0	0	0	0	0	0
9.05	115	4	0	0	0	0	0	0	0	0	0	0
9.10	179	6	0	0	0	0	0	0	0	0	0	0
9.15	203	7	0	0	0	0	0	0	0	0	0	0
9.20	165	5	0	0	0	0	0	0	0	0	0	0
9.25	145	5	0	0	0	0	0	0	0	0	0	0
9.30	130	4	0	0	0	0	0	0	0	0	0	0
9.35	152	5	0	0	0	0	0	0	0	0	0	0
9.40	203	7	0	0	0	0	0	0	0	0	0	0
9.45	252	8	0	0	0	0	0	0	0	0	0	0
9.50	272	9	0	0	0	0	0	0	0	0	0	0
9.55	154	5	0	0	0	0	0	0	0	0	0	0
9.60	255	8	0	0	0	0	0	0	0	0	0	0
9.65	274	9	0	0	0	0	0	0	0	0	0	0
9.70	206	7	0	0	0	0	0	0	0	0	0	0
9.75	71	2	0	0	0	0	0	0	0	0	0	0
9.80	45	1	0	0	0	0	0	0	0	0	0	0
9.85	8	0	0	0	0	0	0	0	0	0	0	0
9.90	0	0	0	0	0	0	0	0	0	0	0	0
9.95	0	0	0	0	0	0	0	0	0	0	0	0
10.00	0	0	0	0	0	0	0	0	0	0	0	0
10.05	0	0	0	0	0	0	0	0	0	0	0	0
10.10	0	0	0	0	0	0	0	0	0	0	0	0
10.15	0	0	0	0	0	0	0	0	0	0	0	0
10.20	0	0	0	0	0	0	0	0	0	0	0	0
10.25	0	0	0	0	0	0	0	0	0	0	0	0
10.30	0	0	0	0	0	0	0	0	0	0	0	0
10.35	0	0	0	0	0	0	0	0	0	0	0	0
10.40	0	0	0	0	0	0	0	0	0	0	0	0
10.45	0	0	0	0	0	0	0	0	0	0	0	0
10.50	0	0	0	0	0	0	0	0	0	0	0	0
10.55	0	0	0	0	0	0	0	0	0	0	0	0
10.60	0	0	0	0	0	0	0	0	0	0	0	0
10.65	0	0	0	0	0	0	0	0	0	0	0	0
10.70	0	0	0	0	0	0	0	0	0	0	0	0
10.75	0	0	0	0	0	0	0	0	0	0	0	0
10.80	0	0	0	0	0	0	0	0	0	0	0	0
10.85	0	0	0	0	0	0	0	0	0	0	0	0
10.90	0	0	0	0	0	0	0	0	0	0	0	0
10.95	0	0	0	0	0	0	0	0	0	0	0	0
11.00	0	0	0	0	0	0	0	0	0	0	0	0
11.05	0	0	0	0	0	0	0	0	0	0	0	0
11.10	0	0	0	0	0	0	0	0	0	0	0	0
11.15	0	0	0	0	0	0	0	0	0	0	0	0
11.20	0	0	0	0	0	0	0	0	0	0	0	0
11.25	0	0	0	0	0	0	0	0	0	0	0	0
11.30	0	0	0	0	0	0	0	0	0	0	0	0
11.35	0	0	0	0	0	0	0	0	0	0	0	0
11.40	0	0	0	0	0	0	0	0	0	0	0	0
11.45	0	0	0	0	0	0	0	0	0	0	0	0
11.50	0	0	0	0	0	0	0	0	0	0	0	0
11.55	0	0	0	0	0	0	0	0	0	0	0	0
11.60	0	0	0	0	0	0	0	0	0	0	0	0
11.65	0	0	0	0	0	0	0	0	0	0	0	0
11.70	0	0	0	0	0	0	0	0	0	0	0	0
11.75	0	0	0	0	0	0	0	0	0	0	0	0
11.80	0	0	0	0	0	0	0	0	0	0	0	0
11.85	0	0	0	0	0	0	0	0	0	0	0	0
11.90	0	0	0	0	0	0	0	0	0	0	0	0
11.95	0	0	0	0	0	0	0	0	0	0	0	0
12.00	0	0	0	0	0	0	0	0	0	0	0	0
12.05	0	0	0	0	0	0	0	0	0	0	0	0
12.10	0	0	0	0	0	0	0	0	0	0	0	0
12.15	0	0	0	0	0	0	0	0	0	0	0	0
12.20	0	0	0	0	0	0	0	0	0	0	0	0
12.25	0	0	0	0	0	0	0	0	0	0	0	0
12.30	0	0	0	0	0	0	0	0	0	0	0	0
12.35	0	0	0	0	0	0	0	0	0	0	0	0
12.40	0	0	0	0	0	0	0	0	0	0	0	0
12.45	0	0	0	0	0	0	0	0	0	0	0	0
12.50	0	0	0	0	0	0	0	0	0	0	0	0
12.55	0	0	0	0	0	0	0	0	0	0	0	0
12.60	0	0	0	0	0	0	0	0	0	0	0	0
12.65	0	0	0	0	0	0	0	0	0	0	0	0
12.70	0	0	0	0	0	0	0	0	0	0	0	0
12.75	1	0	0	0	0	0	0	0	0	0	0	0
12.80	0	0	0	0	0	0	0	0	0	0	0	0
12.85	0	0	0	0	0	0	0	0	0	0	0	0
12.90	0	0	0	0	0	0	0	0	0	0	0	0
12.95	0	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 12.95 = 4

NUMBER OF OBSERVATIONS = 3000

MEAN TEMP = 9.39 DEG. C.

FIG. 8d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

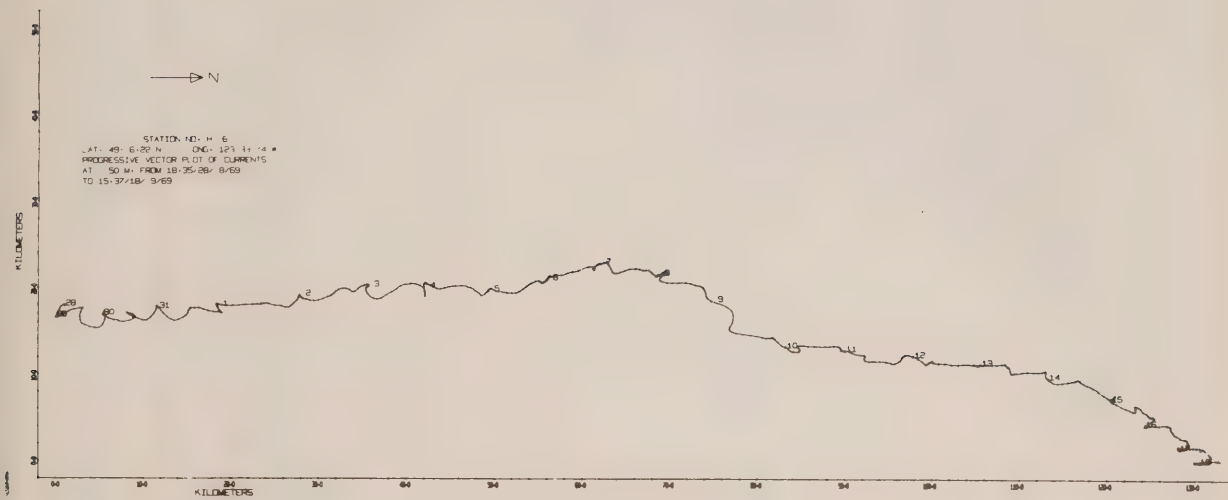


Fig. 8e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 21-day period during August 28 through September 18, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 17.57/18/ 9/69 TO 12.29/16/10/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
0	0	0	0	I	I	I	I	I	I	I	I	I	I
10	52	1	0	*****									
20	55	1	0	*****									
30	47	1	0	*****									
40	100	3	0	*****									
50	88	2	0	*****									
60	157	4	0	*****									
70	139	3	0	*****									
80	230	6	0	*****									
90	172	4	0	*****									
100	187	5	0	*****									
110	307	8	0	*****									
120	201	5	0	*****									
130	314	8	0	*****									
140	182	5	0	*****									
150	235	6	0	*****									
160	165	4	0	*****									
170	153	4	0	*****									
180	184	5	0	*****									
190	143	4	0	*****									
200	187	5	0	*****									
210	88	2	0	*****									
220	115	3	0	*****									
230	73	2	0	*****									
240	63	2	0	*****									
250	84	2	0	*****									
260	42	1	0	*****									
270	57	1	0	*****									
280	33	1	0	*****									
290	33	1	0	*****									
300	14	0	0	***									
310	17	0	0	**									
320	25	1	0	*****									
330	30	1	0	*****									
340	18	0	0	***									
350	10	0	0	**									
360	1	0	0										

NUMBER OF SPEEDS GREATER THAN 360 = 0

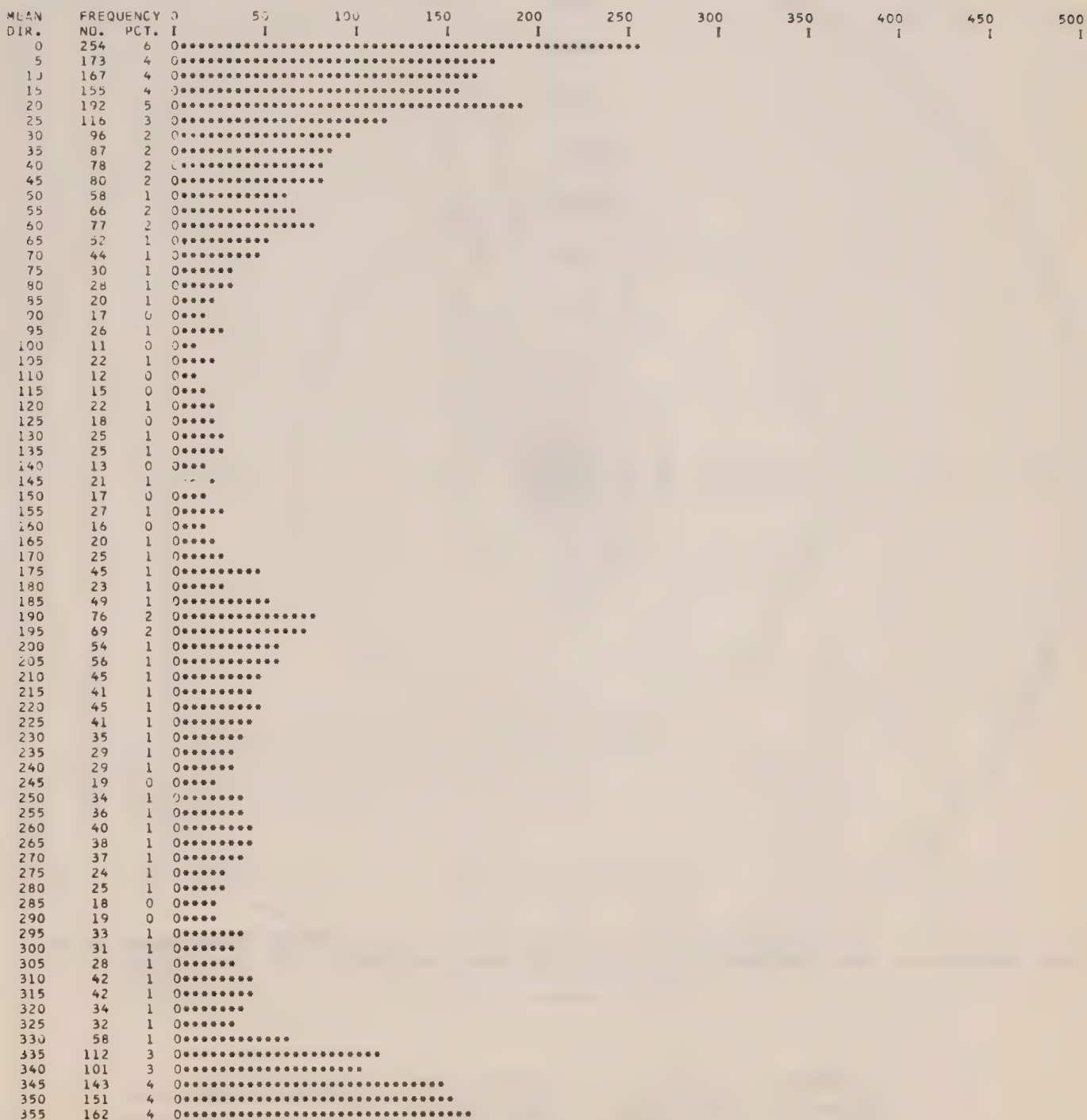
NUMBER OF OBSERVATIONS = 4001

MEAN SPEED = 142 MM/SEC

FIG. 9A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 17.57/18/ 9/69 TO 12.29/16/10/69



NUMBER OF OBSERVATIONS = 4001

FIG. 9B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H-6 LAT. 49-6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 17.57/18/ 9/69 TO 12.29/16/10/69

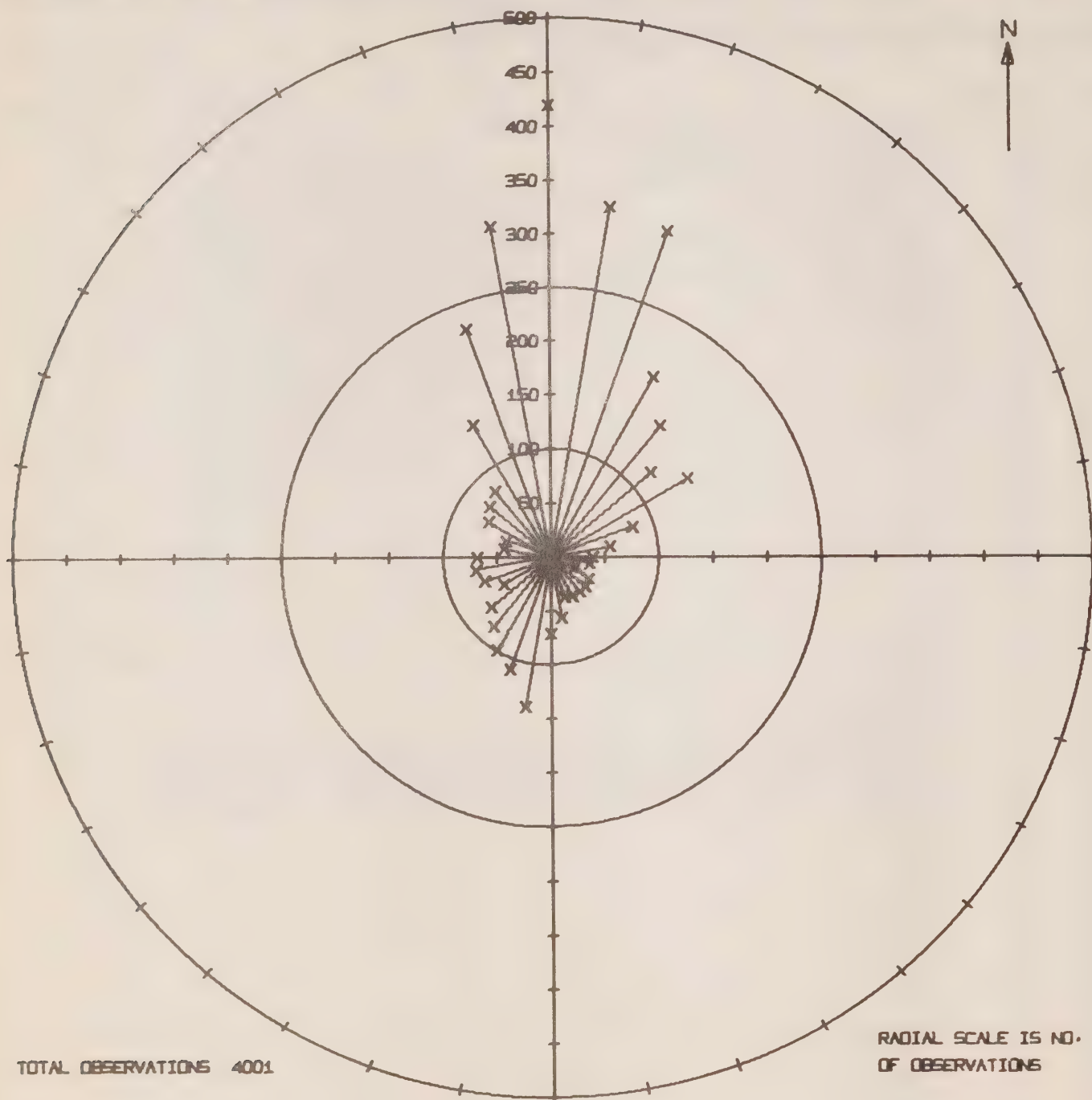


FIG. 9c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 17.57/18/ 9/69 TO 12.29/16/10/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I	1600 I	1800 I	2000 I
4.00	0	0 0										
4.10	0	0 0										
4.20	0	0 0										
4.30	0	0 0										
4.40	0	0 0										
4.50	2	0 0										
4.60	0	0 0										
4.70	0	0 0										
4.80	0	0 0										
4.90	0	0 0										
5.00	0	0 0										
5.10	0	0 0										
5.20	0	0 0										
5.30	0	0 0										
5.40	0	0 0										
5.50	0	0 0										
5.60	0	0 0										
5.70	0	0 0										
5.80	0	0 0										
5.90	0	0 0										
6.00	0	0 0										
6.10	0	0 0										
6.20	1	0 0										
6.30	0	0 0										
6.40	0	0 0										
6.50	0	0 0										
6.60	0	0 0										
6.70	0	0 0										
6.80	0	0 0										
6.90	0	0 0										
7.00	0	0 0										
7.10	0	0 0										
7.20	0	0 0										
7.30	0	0 0										
7.40	0	0 0										
7.50	0	0 0										
7.60	0	0 0										
7.70	0	0 0										
7.80	0	0 0										
7.90	0	0 0										
8.00	0	0 0										
8.10	0	0 0										
8.20	0	0 0										
8.30	0	0 0										
8.40	0	0 0										
8.50	0	0 0										
8.60	0	0 0										
8.70	0	0 0										
8.80	14	0 0*										
8.90	313	8 0*****										
9.00	1313	33 0*****										
9.10	641	16 0*****										
9.20	724	18 0*****										
9.30	354	9 0*****										
9.40	406	10 0*****										
9.50	210	5 0*****										
9.60	20	1 0*										
9.70	3	0 0										

NUMBER OF TEMP. GREATER THAN 9.70 = 0

NUMBER OF OBSERVATIONS = 4001

MEAN TEMP = 9.14 DEG. C.

FIG. 9d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

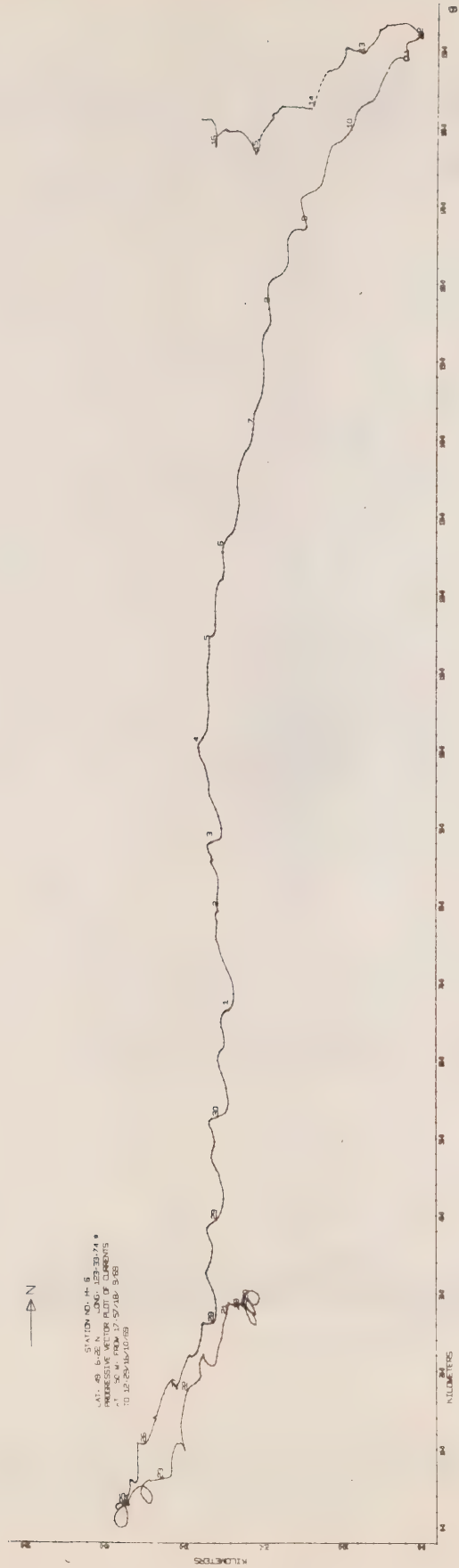


Fig. 9e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 28-day period during September 18 through October 16, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 5.2' N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 15.45/16/10/69 TO 12.21/25/11/69

MEAN SPEED	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350	400	450	500
0	0	0	0										
10	223	4	0	*****									
20	153	3	0	*****									
30	143	2	0	*****									
40	354	6	0	*****	*****								
50	287	5	0	*****	*****								
60	419	7	0	*****	*****	*****							
70	254	4	0	*****	*****	*****							
80	376	7	0	*****	*****	*****	*****						
90	275	5	0	*****	*****	*****	*****						
100	256	4	0	*****	*****	*****	*****						
110	403	7	0	*****	*****	*****	*****	*****					
120	261	5	0	*****	*****	*****	*****	*****					
130	362	6	0	*****	*****	*****	*****	*****	*****				
140	216	4	0	*****	*****	*****	*****	*****	*****				
150	311	5	0	*****	*****	*****	*****	*****	*****	*****			
160	194	3	0	*****	*****	*****	*****	*****	*****	*****			
170	185	3	0	*****	*****	*****	*****	*****	*****	*****			
180	249	4	0	*****	*****	*****	*****	*****	*****	*****			
190	129	2	0	*****	*****	*****	*****	*****	*****	*****			
200	160	3	0	*****	*****	*****	*****	*****	*****	*****			
210	108	2	0	*****	*****	*****	*****	*****	*****	*****			
220	111	2	0	*****	*****	*****	*****	*****	*****	*****			
230	52	1	0	*****	*****	*****	*****	*****	*****	*****			
240	41	1	0	*****	*****	*****	*****	*****	*****	*****			
250	46	1	0	*****	*****	*****	*****	*****	*****	*****			
260	33	1	0	*****	*****	*****	*****	*****	*****	*****			
270	29	1	0	*****	*****	*****	*****	*****	*****	*****			
280	22	0	0	*****	*****	*****	*****	*****	*****	*****			
290	26	0	0	*****	*****	*****	*****	*****	*****	*****			
300	10	0	0	*****	*****	*****	*****	*****	*****	*****			
310	10	0	0	*****	*****	*****	*****	*****	*****	*****			
320	16	0	0	*****	*****	*****	*****	*****	*****	*****			
330	11	0	0	*****	*****	*****	*****	*****	*****	*****			
340	6	0	0	*****	*****	*****	*****	*****	*****	*****			
350	5	0	0	*****	*****	*****	*****	*****	*****	*****			
360	4	0	0	*****	*****	*****	*****	*****	*****	*****			
370	1	0	0	*****	*****	*****	*****	*****	*****	*****			
380	1	0	0	*****	*****	*****	*****	*****	*****	*****			

NUMBER OF SPEEDS GREATER THAN 380 = 0

NUMBER OF OBSERVATIONS = 5742

MEAN SPEED = 114 MM/SEC

FIG. 10A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 5.2' N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 15.45/16/11/69 TO 12.21/25/11/69



NUMBER OF OBSERVATIONS = 5742

FIG. 10b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

STATION NO. H-6 LAT. 49-6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 15.45/16/10/69 TO 12.21/25/11/69

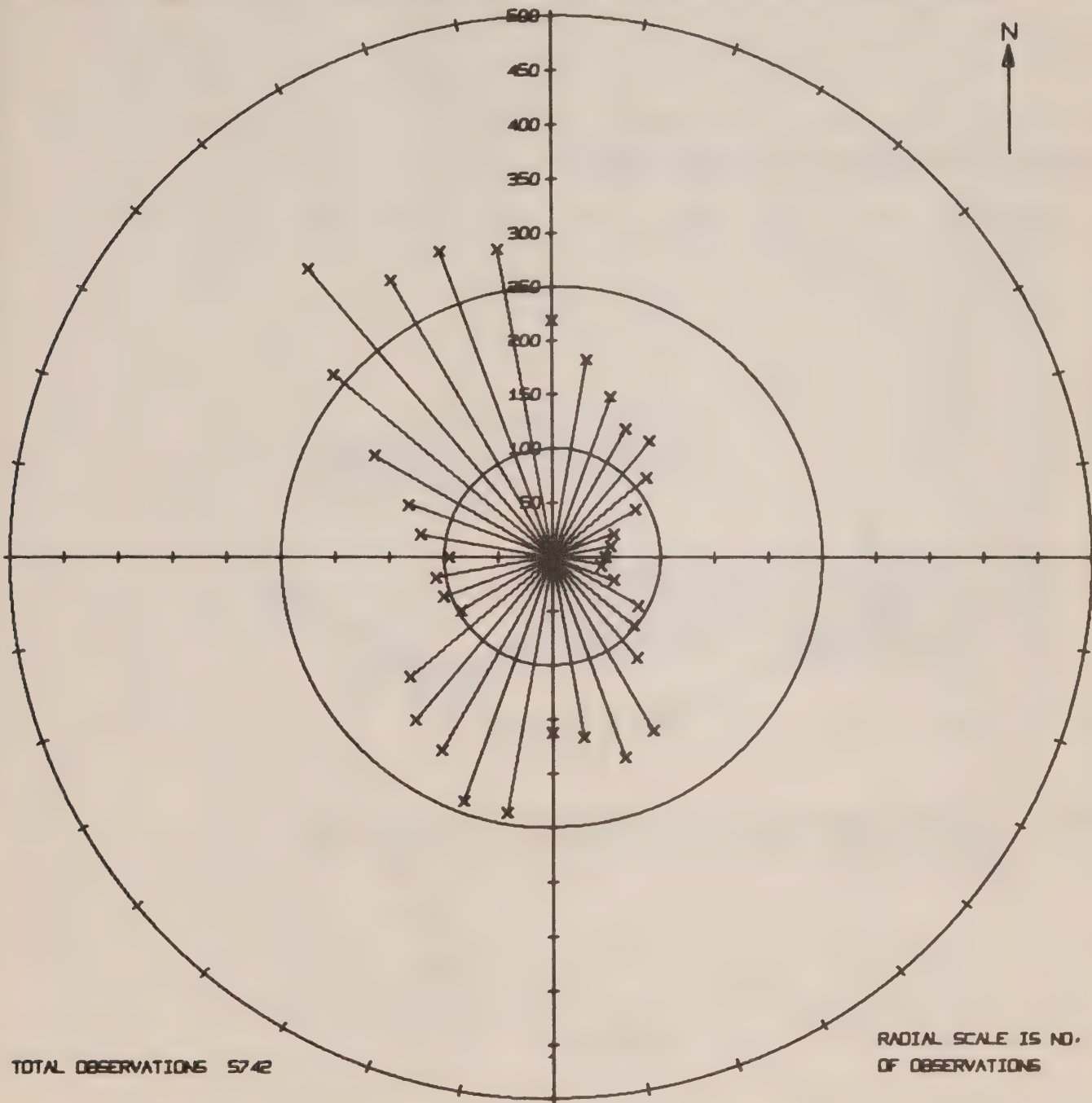


FIG. 10c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

STATION NO. H- 6 LAT. 42- 6.20 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 15.45/16/10/69 TO 12.21/25/11/69

MEAN TEMP.	FREQUENCY NO.	PCT. PCT. I	0	200	400	600	800	1000	1200	1400	1600	1800	2000
			I	I	I	I	I	I	I	I	I	I	I
8.00	0	0	0										
8.05	0	0	0										
8.10	0	0	0										
8.15	0	0	0										
8.20	0	0	0										
8.25	0	0	0										
8.30	0	0	0										
8.35	0	0	0										
8.40	0	0	0										
8.45	0	0	0										
8.50	0	0	0										
8.55	0	0	0										
8.60	0	0	0										
8.65	0	0	0										
8.70	0	0	0										
8.75	0	0	0										
8.80	0	0	0										
8.85	0	0	0										
8.90	0	0	0										
8.95	0	0	0										
9.00	5	0	0										
9.05	730	13	0	*****									
9.10	1090	19	0	*****									
9.15	1067	19	0	*****									
9.20	830	14	0	*****									
9.25	811	14	0	*****									
9.30	842	15	0	*****									
9.35	312	5	0	*****									
9.40	45	1	0	**									
9.45	10	0	0	*									

NUMBER OF TEMP. GREATER THAN 9.45 = 0

NUMBER OF OBSERVATIONS = 5742

MEAN TEMP = 9.19 DEG. C

FIG. 10. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

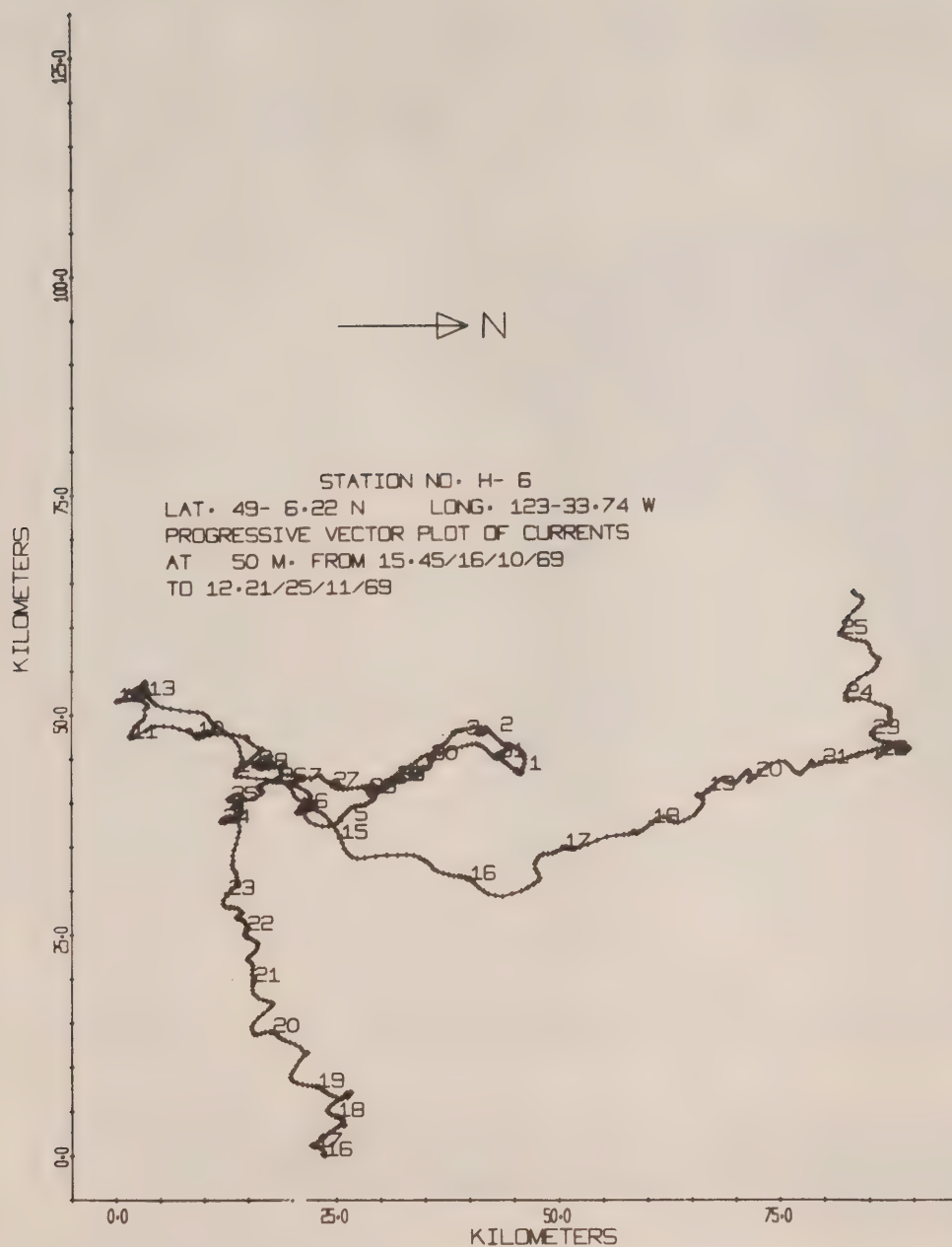


Fig. 10e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 40-day period during October 16 through November 25, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 16.39/25/11/69 TO 9.40/14/ 1/70

MEAN SPEED	FREQUENCY NO.	PCT. I	0 I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	0	0	0										
10	154	2	0	*****									
20	98	1	0	*****									
30	133	2	0	*****									
40	310	4	0	*****									
50	268	4	0	*****									
60	451	6	0	*****									
70	301	4	0	*****									
80	504	7	0	*****									
90	376	5	0	*****									
100	360	5	0	*****									
110	498	7	0	*****									
120	308	4	0	*****									
130	446	6	0	*****									
140	254	4	0	*****									
150	403	6	0	*****									
160	255	4	0	*****									
170	268	4	0	*****									
180	362	5	0	*****									
190	170	2	0	*****									
200	214	3	0	*****									
210	100	1	0	*****									
220	140	2	0	*****									
230	77	1	0	*****									
240	84	1	0	*****									
250	94	1	0	*****									
260	61	1	0	*****									
270	80	1	0	*****									
280	41	1	0	****									
290	47	1	0	****									
300	33	0	0	***									
310	47	1	0	****									
320	49	1	0	****									
330	43	1	0	****									
340	36	1	0	****									
350	18	0	0	**									
360	16	0	0	**									
370	16	0	0	**									
380	14	0	0	*									
390	10	0	0	*									
400	5	0	0	*									
410	5	0	0	*									
420	1	0	0										
430	6	0	0	*									
440	2	0	0										
450	3	0	0										

NUMBER OF SPEEDS GREATER THAN 450 = 0

NUMBER OF OBSERVATIONS = 7161

MEAN SPEED = 131 MM/SEC

FIG. 11A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 50-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 14, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 16.39/25/11/69 TO 9.40/14/ 1/70

MEAN	FREQUENCY	0	50	100	150	200	250	300	350	400	450	500
DIR.	NO.	PCT.	I	I	I	I	I	I	I	I	I	I
0	211	3	0	0	0	0	0	0	0	0	0	0
5	155	2	0	0	0	0	0	0	0	0	0	0
10	146	2	0	0	0	0	0	0	0	0	0	0
15	167	2	0	0	0	0	0	0	0	0	0	0
20	212	3	0	0	0	0	0	0	0	0	0	0
25	118	2	0	0	0	0	0	0	0	0	0	0
30	120	2	0	0	0	0	0	0	0	0	0	0
35	133	2	0	0	0	0	0	0	0	0	0	0
40	91	1	0	0	0	0	0	0	0	0	0	0
45	121	2	0	0	0	0	0	0	0	0	0	0
50	99	1	0	0	0	0	0	0	0	0	0	0
55	92	1	0	0	0	0	0	0	0	0	0	0
60	83	1	0	0	0	0	0	0	0	0	0	0
65	57	1	0	0	0	0	0	0	0	0	0	0
70	49	1	0	0	0	0	0	0	0	0	0	0
75	55	1	0	0	0	0	0	0	0	0	0	0
80	41	1	0	0	0	0	0	0	0	0	0	0
85	45	1	0	0	0	0	0	0	0	0	0	0
90	31	0	0	0	0	0	0	0	0	0	0	0
95	32	0	0	0	0	0	0	0	0	0	0	0
100	53	1	0	0	0	0	0	0	0	0	0	0
105	50	1	0	0	0	0	0	0	0	0	0	0
110	54	1	0	0	0	0	0	0	0	0	0	0
115	45	1	0	0	0	0	0	0	0	0	0	0
120	32	0	0	0	0	0	0	0	0	0	0	0
125	49	1	0	0	0	0	0	0	0	0	0	0
130	59	1	0	0	0	0	0	0	0	0	0	0
135	45	1	0	0	0	0	0	0	0	0	0	0
140	73	1	0	0	0	0	0	0	0	0	0	0
145	75	1	0	0	0	0	0	0	0	0	0	0
150	66	1	0	0	0	0	0	0	0	0	0	0
155	86	1	0	0	0	0	0	0	0	0	0	0
160	85	1	0	0	0	0	0	0	0	0	0	0
165	117	2	0	0	0	0	0	0	0	0	0	0
170	117	2	0	0	0	0	0	0	0	0	0	0
175	120	2	0	0	0	0	0	0	0	0	0	0
180	116	2	0	0	0	0	0	0	0	0	0	0
185	117	2	0	0	0	0	0	0	0	0	0	0
190	106	1	0	0	0	0	0	0	0	0	0	0
195	105	1	0	0	0	0	0	0	0	0	0	0
200	102	1	0	0	0	0	0	0	0	0	0	0
205	81	1	0	0	0	0	0	0	0	0	0	0
210	69	1	0	0	0	0	0	0	0	0	0	0
215	52	1	0	0	0	0	0	0	0	0	0	0
220	54	1	0	0	0	0	0	0	0	0	0	0
225	58	1	0	0	0	0	0	0	0	0	0	0
230	57	1	0	0	0	0	0	0	0	0	0	0
235	45	1	0	0	0	0	0	0	0	0	0	0
240	56	1	0	0	0	0	0	0	0	0	0	0
245	49	1	0	0	0	0	0	0	0	0	0	0
250	39	1	0	0	0	0	0	0	0	0	0	0
255	62	1	0	0	0	0	0	0	0	0	0	0
260	52	1	0	0	0	0	0	0	0	0	0	0
265	68	1	0	0	0	0	0	0	0	0	0	0
270	71	1	0	0	0	0	0	0	0	0	0	0
275	79	1	0	0	0	0	0	0	0	0	0	0
280	68	1	0	0	0	0	0	0	0	0	0	0
285	60	1	0	0	0	0	0	0	0	0	0	0
290	87	1	0	0	0	0	0	0	0	0	0	0
295	118	2	0	0	0	0	0	0	0	0	0	0
300	113	2	0	0	0	0	0	0	0	0	0	0
305	99	1	0	0	0	0	0	0	0	0	0	0
310	104	1	0	0	0	0	0	0	0	0	0	0
315	141	2	0	0	0	0	0	0	0	0	0	0
320	141	2	0	0	0	0	0	0	0	0	0	0
325	217	3	0	0	0	0	0	0	0	0	0	0
330	251	4	0	0	0	0	0	0	0	0	0	0
335	262	4	0	0	0	0	0	0	0	0	0	0
340	238	3	0	0	0	0	0	0	0	0	0	0
345	247	3	0	0	0	0	0	0	0	0	0	0
350	219	3	0	0	0	0	0	0	0	0	0	0
355	174	2	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 7161

FIG. 11B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 50-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970.

STATION NO. H- 6

LAT. 49- 6.22 N

LONG. 123-33.74 W

DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 16.39/25/11/69 TO 9.40/14/ 1/70

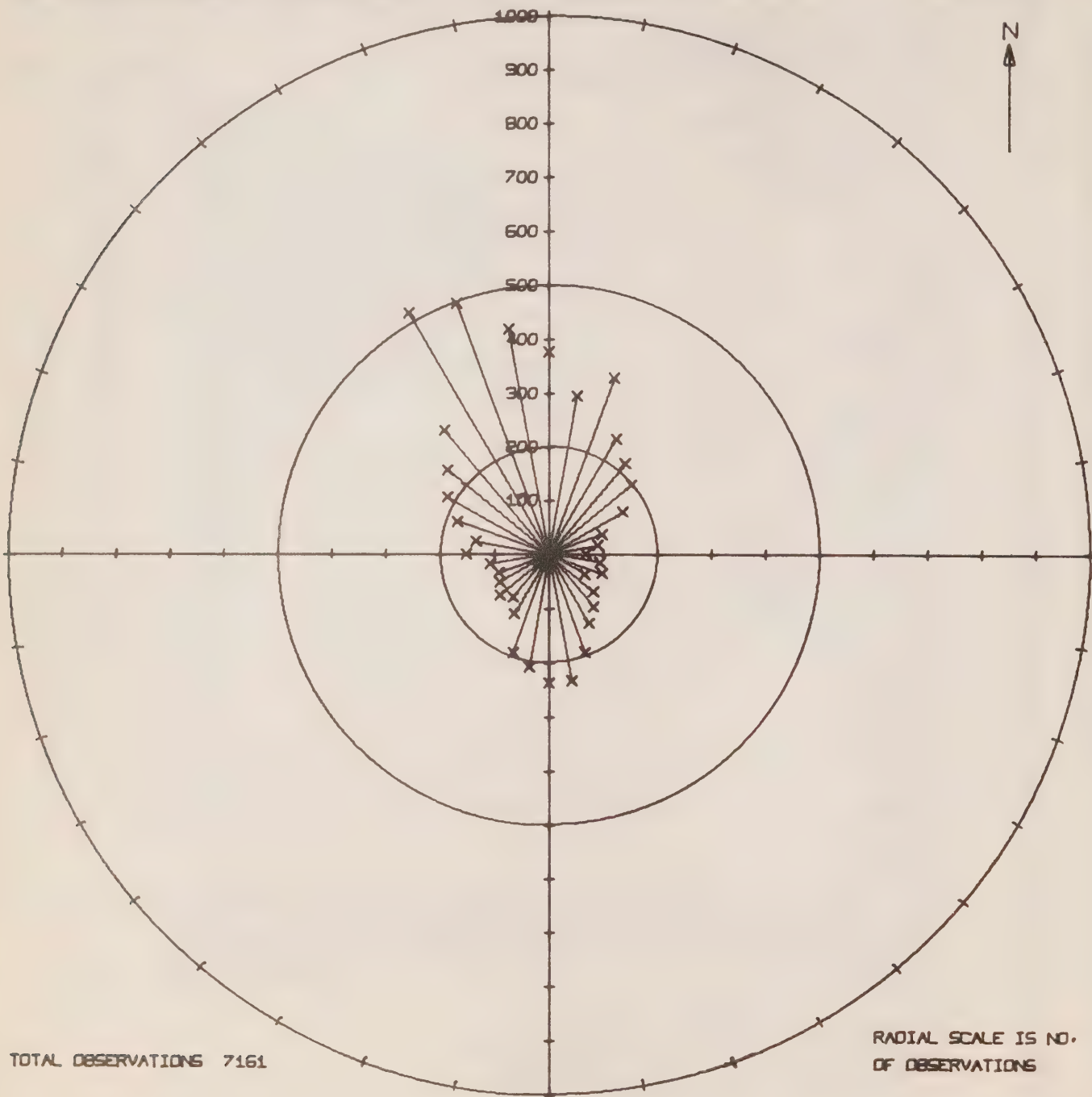


FIG. 11c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 50-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 14, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 16.39/25/11/69 TO 9.40/14/ 1/70

MEAN TEMP.	FREQUENCY NO.	PCT.	I	500 I	1000 I	1500 I	2000 I	2500 I	3000 I	3500 I	4000 I	4500 I	5000 I
8.00	0	0	0										
8.05	0	0	0										
8.10	0	0	0										
8.15	0	0	0										
8.20	6	0	0										
8.25	6	0	0										
8.30	9	0	0										
8.35	10	0	0										
8.40	119	2	0**										
8.45	58	1	0*										
8.50	52	1	0*										
8.55	78	1	0**										
8.60	288	4	0*****										
8.65	646	9	0*****										
8.70	594	8	0*****										
8.75	412	6	0*****										
8.80	166	2	0***										
8.85	356	5	0*****										
8.90	387	5	0*****										
8.95	728	10	0*****										
9.00	812	11	0*****										
9.05	2151	30	0*****										
9.10	249	3	0*****										
9.15	32	0	0*										
9.20	2	0	0										

NUMBER OF TEMP. GREATER THAN 9.20 = 0

NUMBER OF OBSERVATIONS = 7161

MEAN TEMP = 8.88 DEG. C.

FIG. 11b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 50-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 14, 1970.

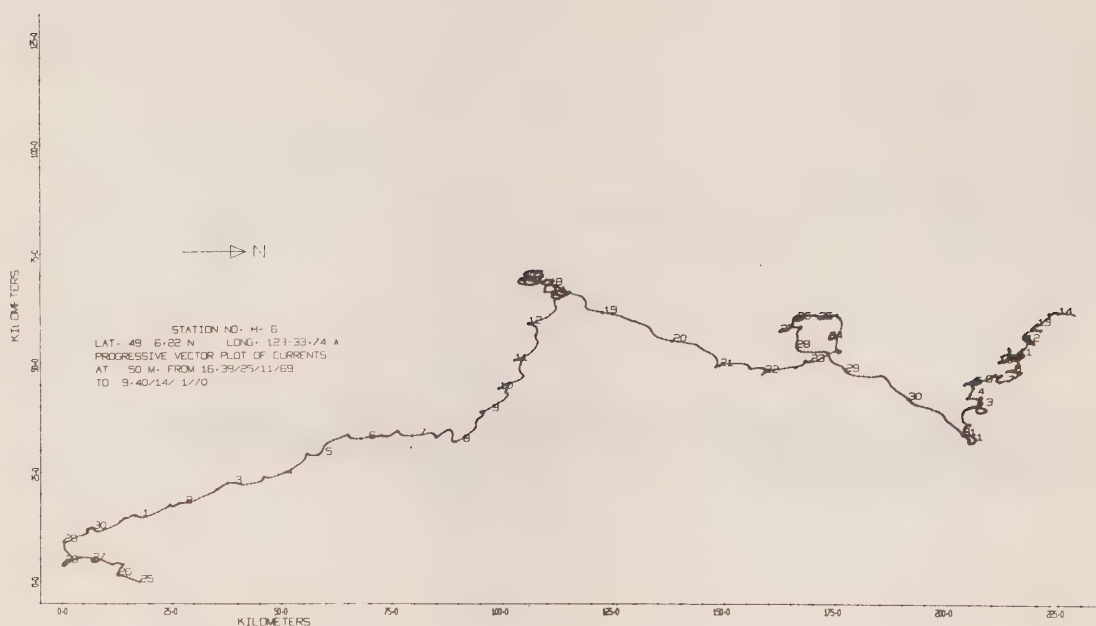


Fig. 11e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 50-day period during November 25, 1969 through January 14, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 12.54/14/ 1/70 TO 9.27/19/ 2/70

MEAN SPEED	FREQUENCY		50	100	150	200	250	300	350	400	450	500
0	NO.	PCT.	I	I	I	I	I	I	I	I	I	I
0	0	0	0									
10	204	4	0	0	0	0	0	0	0	0	0	0
20	108	2	0	0	0	0	0	0	0	0	0	0
30	142	3	0	0	0	0	0	0	0	0	0	0
40	338	7	0	0	0	0	0	0	0	0	0	0
50	241	5	0	0	0	0	0	0	0	0	0	0
60	363	7	0	0	0	0	0	0	0	0	0	0
70	273	5	0	0	0	0	0	0	0	0	0	0
80	386	7	0	0	0	0	0	0	0	0	0	0
90	243	5	0	0	0	0	0	0	0	0	0	0
100	265	5	0	0	0	0	0	0	0	0	0	0
110	331	6	0	0	0	0	0	0	0	0	0	0
120	194	4	0	0	0	0	0	0	0	0	0	0
130	324	6	0	0	0	0	0	0	0	0	0	0
140	208	4	0	0	0	0	0	0	0	0	0	0
150	281	5	0	0	0	0	0	0	0	0	0	0
160	147	3	0	0	0	0	0	0	0	0	0	0
170	151	3	0	0	0	0	0	0	0	0	0	0
180	220	4	0	0	0	0	0	0	0	0	0	0
190	131	3	0	0	0	0	0	0	0	0	0	0
200	130	3	0	0	0	0	0	0	0	0	0	0
210	85	2	0	0	0	0	0	0	0	0	0	0
220	78	2	0	0	0	0	0	0	0	0	0	0
230	56	1	0	0	0	0	0	0	0	0	0	0
240	48	1	0	0	0	0	0	0	0	0	0	0
250	58	1	0	0	0	0	0	0	0	0	0	0
260	33	1	0	0	0	0	0	0	0	0	0	0
270	24	0	0	0	0	0	0	0	0	0	0	0
280	15	0	0	0	0	0	0	0	0	0	0	0
290	23	0	0	0	0	0	0	0	0	0	0	0
300	11	0	0	0	0	0	0	0	0	0	0	0
310	9	0	0	0	0	0	0	0	0	0	0	0
320	16	0	0	0	0	0	0	0	0	0	0	0
330	5	0	0	0	0	0	0	0	0	0	0	0
340	2	0	0	0	0	0	0	0	0	0	0	0
350	1	0	0	0	0	0	0	0	0	0	0	0
360	1	0	0	0	0	0	0	0	0	0	0	0
370	1	0	0	0	0	0	0	0	0	0	0	0
380	1	0	0	0	0	0	0	0	0	0	0	0
390	2	0	0	0	0	0	0	0	0	0	0	0
400	3	0	0	0	0	0	0	0	0	0	0	0
410	4	0	0	0	0	0	0	0	0	0	0	0
420	1	0	0	0	0	0	0	0	0	0	0	0
430	1	0	0	0	0	0	0	0	0	0	0	0
440	1	0	0	0	0	0	0	0	0	0	0	0
450	0	0	0	0	0	0	0	0	0	0	0	0
460	0	0	0	0	0	0	0	0	0	0	0	0
470	0	0	0	0	0	0	0	0	0	0	0	0
480	0	0	0	0	0	0	0	0	0	0	0	0
490	0	0	0	0	0	0	0	0	0	0	0	0
500	0	0	0	0	0	0	0	0	0	0	0	0
510	0	0	0	0	0	0	0	0	0	0	0	0
520	0	0	0	0	0	0	0	0	0	0	0	0
530	0	0	0	0	0	0	0	0	0	0	0	0
540	0	0	0	0	0	0	0	0	0	0	0	0
550	0	0	0	0	0	0	0	0	0	0	0	0
560	0	0	0	0	0	0	0	0	0	0	0	0
570	0	0	0	0	0	0	0	0	0	0	0	0
580	0	0	0	0	0	0	0	0	0	0	0	0
590	0	0	0	0	0	0	0	0	0	0	0	0
600	0	0	0	0	0	0	0	0	0	0	0	0
610	0	0	0	0	0	0	0	0	0	0	0	0
620	0	0	0	0	0	0	0	0	0	0	0	0
630	0	0	0	0	0	0	0	0	0	0	0	0
640	0	0	0	0	0	0	0	0	0	0	0	0
650	1	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 650 = 0

NUMBER OF OBSERVATIONS = 5160

MEAN SPEED = 113 MM/SEC

FIG. 12A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 36-DAY PERIOD DURING JANUARY 14 THROUGH FEBRUARY 19, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 12.54/14/ 1/70 TO 09.27/19/ 2/70

MEAN DIR.	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350	400	450	500
0	40	1	0*****	I	I	I	I	I	I	I	I	I	I
5	23	0	0*****										
10	31	1	0*****										
15	34	1	0*****										
20	54	1	0*****										
25	37	1	0*****										
30	33	1	0*****										
35	42	1	0*****										
40	43	1	0*****										
45	38	1	0*****										
50	22	0	0****										
55	17	0	0***										
60	8	0	0**										
65	17	0	0**										
70	14	0	0**										
75	16	0	0**										
80	19	0	0**										
85	16	0	0**										
90	10	0	0*										
95	21	0	0****										
100	26	1	0*****										
105	43	1	0*****										
110	38	1	0*****										
115	45	1	0*****										
120	44	1	0*****										
125	46	1	0*****										
130	53	1	0*****										
135	82	2	0*****										
140	75	1	0*****										
145	108	2	0*****										
150	138	3	0*****										
155	178	3	0*****										
160	178	3	0*****										
165	133	3	0*****										
170	176	3	0*****										
175	224	4	0*****										
180	247	5	0*****										
185	246	5	0*****										
190	235	5	0*****										
195	194	4	0*****										
200	168	3	0*****										
205	156	3	0*****										
210	94	2	0*****										
215	113	2	0*****										
220	73	1	0*****										
225	50	1	0*****										
230	59	1	0*****										
235	62	1	0*****										
240	41	1	0*****										
245	60	1	0*****										
250	37	1	0*****										
255	37	1	0*****										
260	37	1	0*****										
265	37	1	0*****										
270	35	1	0*****										
275	24	0	0****										
280	16	0	0***										
285	30	1	0*****										
290	27	0	0***										
295	38	1	0*****										
300	57	1	0*****										
305	43	1	0*****										
310	63	1	0*****										
315	105	2	0*****										
320	91	2	0*****										
325	122	2	0*****										
330	118	2	0*****										
335	101	2	0*****										
340	66	1	0*****										
345	62	1	0*****										
350	58	1	0*****										
355	34	1	0*****										

NUMBER OF OBSERVATIONS = 5160

FIG. 12B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 36-DAY PERIOD DURING JANUARY 14 THROUGH FEBRUARY 19, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
 DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 12.54/14/ 1/70 TO 9.27/19/ 2/70

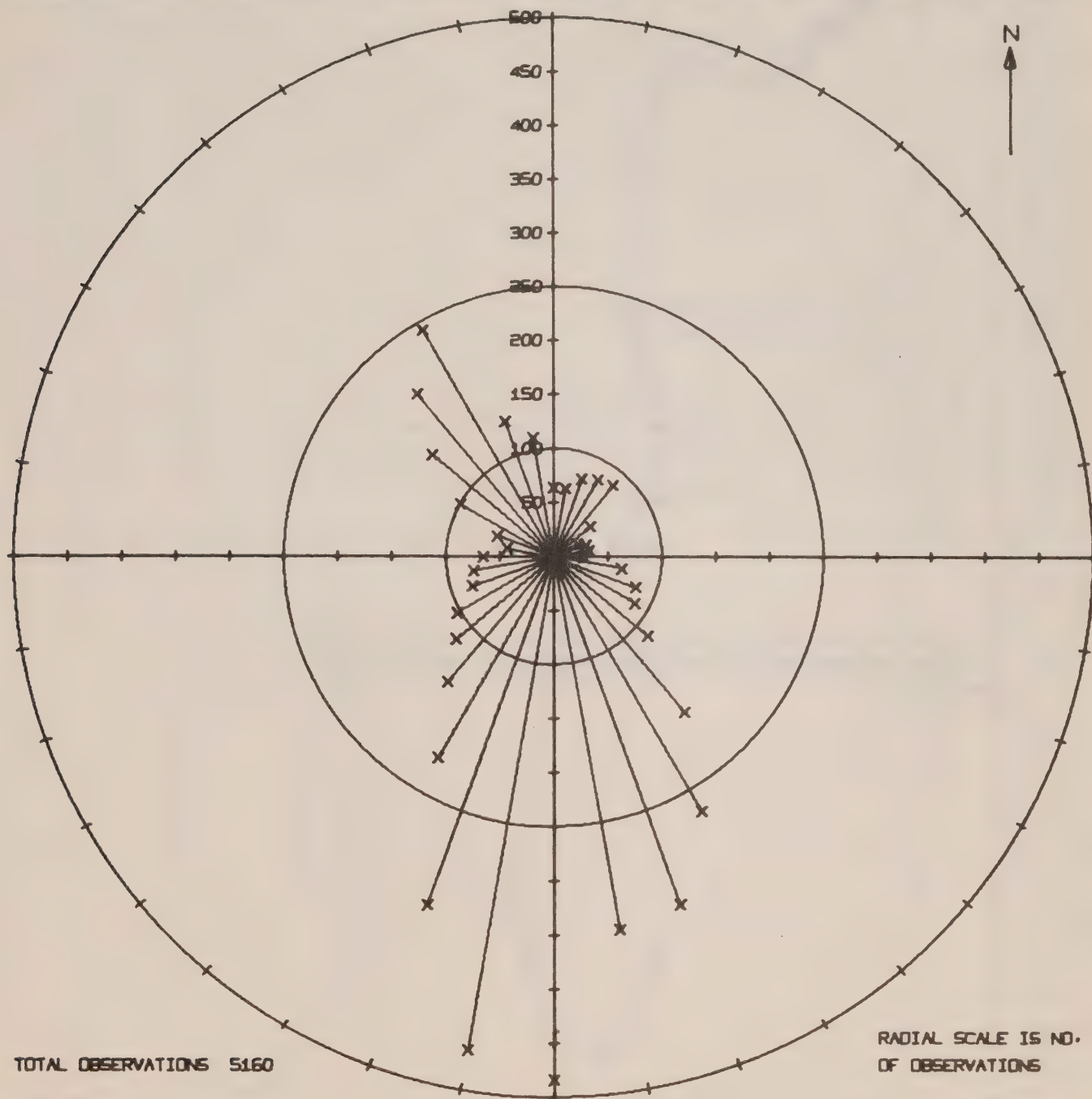


FIG. 12c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 36-DAY PERIOD DURING JANUARY 14 THROUGH FEBRUARY 19, 1970.

STATION NO. H- 6 LAT. 49- 6.27 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 12.54/14/ 1/70 TO 9.27/19/ 2/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
7.00	0	0										
7.05	0	0										
7.10	0	0										
7.15	0	0										
7.20	0	0										
7.25	0	0										
7.30	0	0										
7.35	0	0										
7.40	0	0										
7.45	0	0										
7.50	0	0										
7.55	11	0										
7.60	33	1										
7.65	23	0										
7.70	38	1										
7.75	46	1										
7.80	33	1										
7.85	131	3										
7.90	85	2										
7.95	324	6										
8.00	376	7										
8.05	297	6										
8.10	182	4										
8.15	150	3										
8.20	120	2										
8.25	208	4										
8.30	541	10										
8.35	705	14										
8.40	330	6										
8.45	289	6										
8.50	106	3										
8.55	556	11										
8.60	480	9										
8.65	36	1										

NUMBER OF TEMP. GREATER THAN 8.55 = 1

NUMBER OF OBSERVATIONS = 5160

MEAN TEMP = 8.27 DEG. C.

FIG. 12D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 36-DAY PERIOD DURING JANUARY 14 THROUGH FEBRUARY 19, 1970.

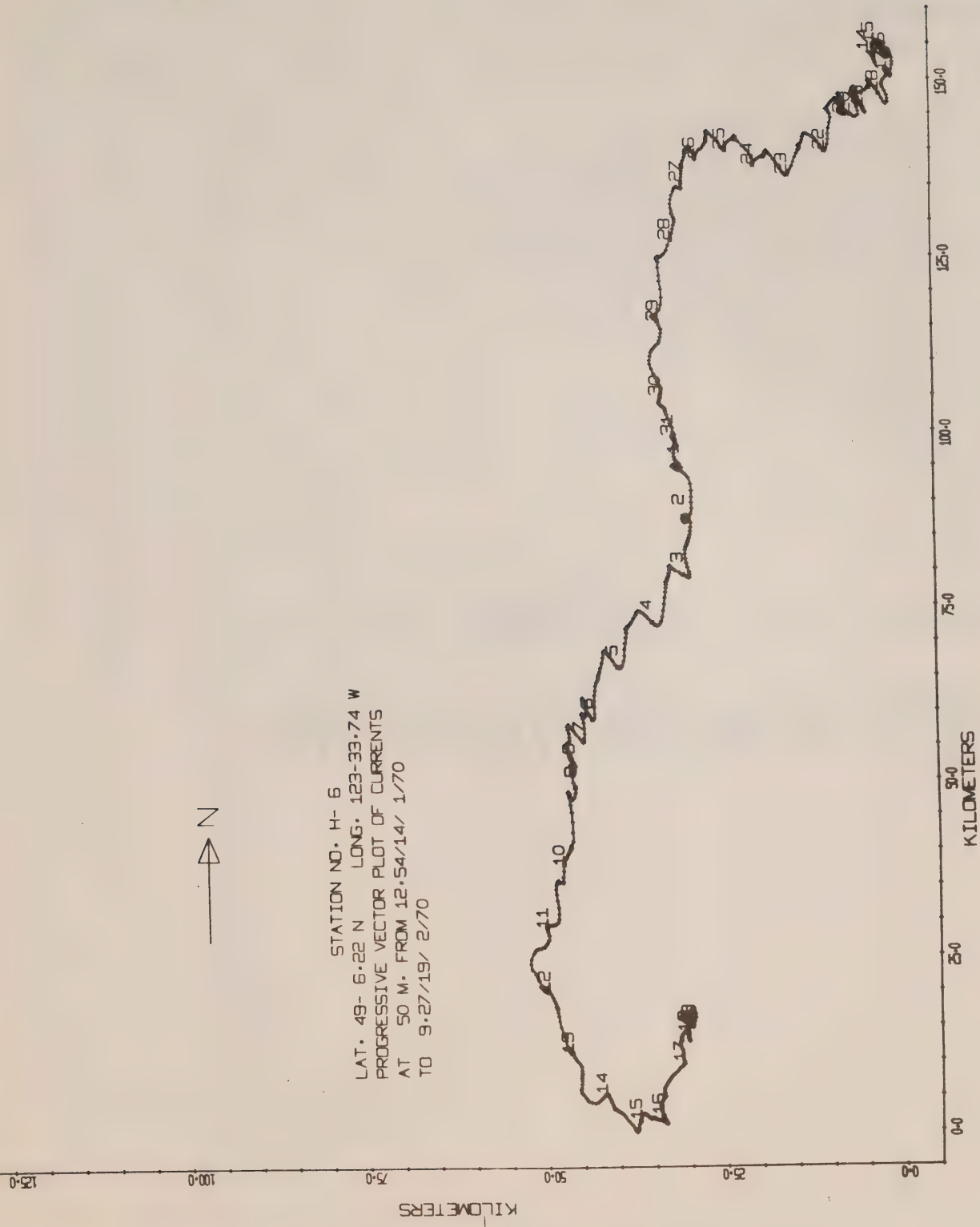


Fig. 12e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 36-day period during January 14 through February 19, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11.54/19/ 2/70 TO 13.59/25/ 3/70

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I	I
0	311	6	0*****										
10	149	3	0*****										
20	184	4	0*****										
30	406	8	0*****										
40	279	6	0*****										
50	414	8	0*****										
60	239	5	0*****										
70	368	7	0*****										
80	223	5	0*****										
90	251	5	0*****										
100	326	7	0*****										
110	225	5	0*****										
120	309	6	0*****										
130	161	3	0*****										
140	235	5	0*****										
150	120	2	0*****										
160	121	2	0*****										
170	164	3	0*****										
180	100	2	0*****										
190	100	2	0*****										
200	46	1	0*****										
210	68	1	0*****										
220	29	1	0*****										
230	23	0	0*****										
240	15	0	0***										
250	7	0	0*										
260	7	0	0*										
270	6	0	0*										
280	13	0	0***										
290	3	0	0*										
300	5	0	0*										
310	1	0	0										
320	1	0	0										
330													

NUMBER OF SPEEDS GREATER THAN 330 = 0

NUMBER OF OBSERVATIONS = 4909

MEAN SPEED = 97 MM/SEC

FIG. 13A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 5.2? N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11.54/19/ 2/70 TO 13.59/25/ 3/70

MEAN DIR.	FREQUENCY NO.	0 PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
0	75	2	0	0	0	0	0	0	0	0	0	0
5	67	1	0	0	0	0	0	0	0	0	0	0
10	47	1	0	0	0	0	0	0	0	0	0	0
15	45	1	0	0	0	0	0	0	0	0	0	0
20	85	2	0	0	0	0	0	0	0	0	0	0
25	44	1	0	0	0	0	0	0	0	0	0	0
30	31	1	0	0	0	0	0	0	0	0	0	0
35	26	1	0	0	0	0	0	0	0	0	0	0
40	35	1	0	0	0	0	0	0	0	0	0	0
45	39	1	0	0	0	0	0	0	0	0	0	0
50	29	1	0	0	0	0	0	0	0	0	0	0
55	33	1	0	0	0	0	0	0	0	0	0	0
60	26	1	0	0	0	0	0	0	0	0	0	0
65	31	1	0	0	0	0	0	0	0	0	0	0
70	33	1	0	0	0	0	0	0	0	0	0	0
75	38	1	0	0	0	0	0	0	0	0	0	0
80	18	0	0	0	0	0	0	0	0	0	0	0
85	32	1	0	0	0	0	0	0	0	0	0	0
90	30	1	0	0	0	0	0	0	0	0	0	0
95	45	1	0	0	0	0	0	0	0	0	0	0
100	35	1	0	0	0	0	0	0	0	0	0	0
105	51	1	0	0	0	0	0	0	0	0	0	0
110	38	1	0	0	0	0	0	0	0	0	0	0
115	50	1	0	0	0	0	0	0	0	0	0	0
120	59	1	0	0	0	0	0	0	0	0	0	0
125	67	1	0	0	0	0	0	0	0	0	0	0
130	73	1	0	0	0	0	0	0	0	0	0	0
135	95	2	0	0	0	0	0	0	0	0	0	0
140	88	2	0	0	0	0	0	0	0	0	0	0
145	120	2	0	0	0	0	0	0	0	0	0	0
150	143	3	0	0	0	0	0	0	0	0	0	0
155	161	3	0	0	0	0	0	0	0	0	0	0
160	191	4	0	0	0	0	0	0	0	0	0	0
165	175	4	0	0	0	0	0	0	0	0	0	0
170	190	4	0	0	0	0	0	0	0	0	0	0
175	204	4	0	0	0	0	0	0	0	0	0	0
180	207	4	0	0	0	0	0	0	0	0	0	0
185	189	4	0	0	0	0	0	0	0	0	0	0
190	143	3	0	0	0	0	0	0	0	0	0	0
195	150	3	0	0	0	0	0	0	0	0	0	0
200	105	2	0	0	0	0	0	0	0	0	0	0
205	75	2	0	0	0	0	0	0	0	0	0	0
210	46	1	0	0	0	0	0	0	0	0	0	0
215	43	1	0	0	0	0	0	0	0	0	0	0
220	42	1	0	0	0	0	0	0	0	0	0	0
225	39	1	0	0	0	0	0	0	0	0	0	0
230	34	1	0	0	0	0	0	0	0	0	0	0
235	29	1	0	0	0	0	0	0	0	0	0	0
240	24	0	0	0	0	0	0	0	0	0	0	0
245	30	1	0	0	0	0	0	0	0	0	0	0
250	24	0	0	0	0	0	0	0	0	0	0	0
255	25	1	0	0	0	0	0	0	0	0	0	0
260	23	0	0	0	0	0	0	0	0	0	0	0
265	25	1	0	0	0	0	0	0	0	0	0	0
270	28	1	0	0	0	0	0	0	0	0	0	0
275	31	1	0	0	0	0	0	0	0	0	0	0
280	40	1	0	0	0	0	0	0	0	0	0	0
285	45	1	0	0	0	0	0	0	0	0	0	0
290	43	1	0	0	0	0	0	0	0	0	0	0
295	46	1	0	0	0	0	0	0	0	0	0	0
300	40	1	0	0	0	0	0	0	0	0	0	0
305	52	1	0	0	0	0	0	0	0	0	0	0
310	48	1	0	0	0	0	0	0	0	0	0	0
315	47	1	0	0	0	0	0	0	0	0	0	0
320	81	2	0	0	0	0	0	0	0	0	0	0
325	84	2	0	0	0	0	0	0	0	0	0	0
330	92	2	0	0	0	0	0	0	0	0	0	0
335	102	2	0	0	0	0	0	0	0	0	0	0
340	101	2	0	0	0	0	0	0	0	0	0	0
345	77	2	0	0	0	0	0	0	0	0	0	0
350	70	1	0	0	0	0	0	0	0	0	0	0
355	68	1	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 4909

FIG. 13B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

STATION NO. 14-6 LAT. 49-6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 11.54/19/ 2/70 TO 13.58/25/ 3/70

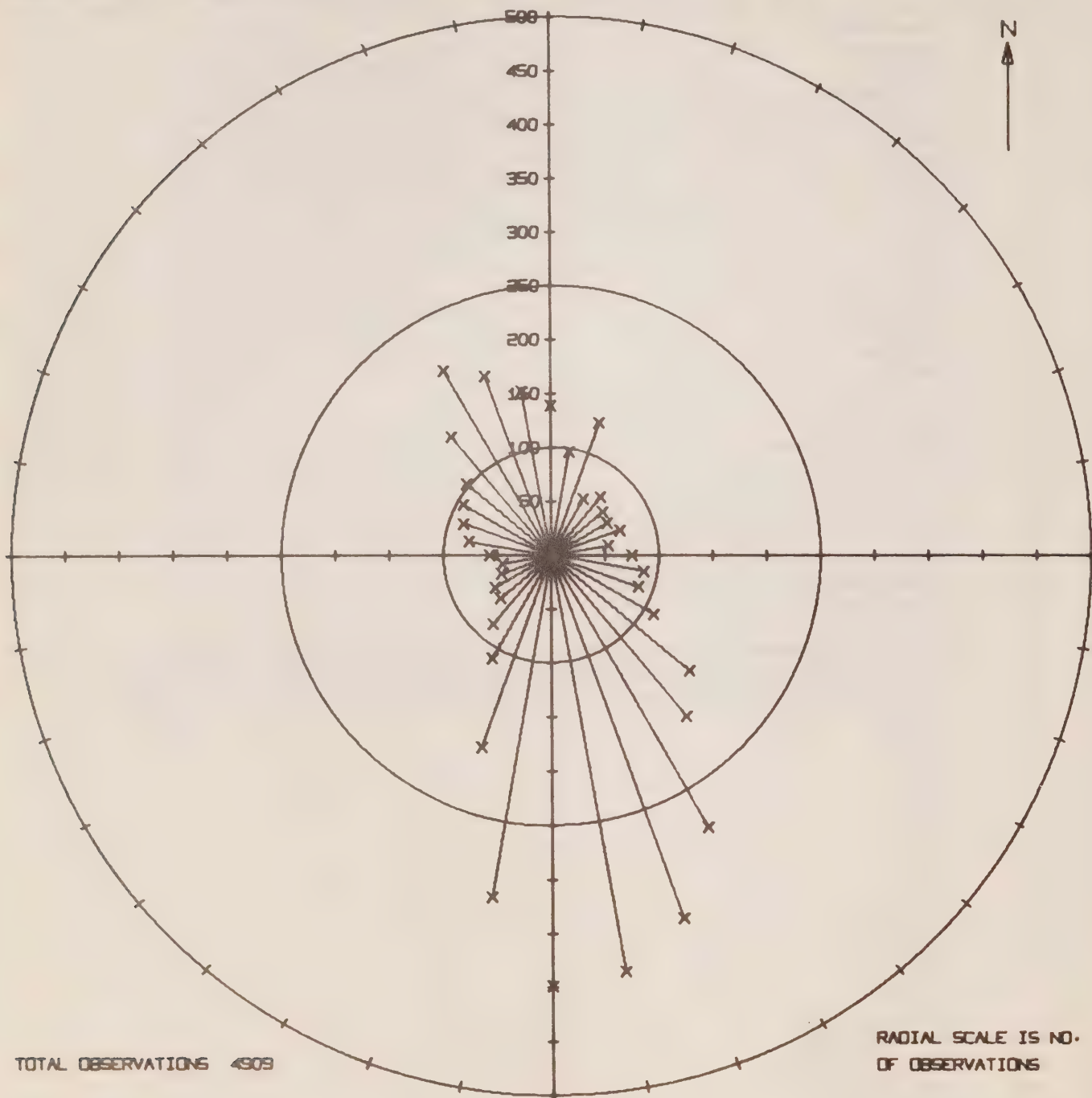


FIG. 13c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

STATION NO. H- 6 LAT. 49- 6.20 N LONG. 123-33.74 W
HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 11.54/19/ 2/70 TO 13.59/25/ 3/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1,000 I
7.00	0	0	0	0	0	0	0	0	0	0	0	0
7.05	0	0	0	0	0	0	0	0	0	0	0	0
7.10	0	0	0	0	0	0	0	0	0	0	0	0
7.15	0	0	0	0	0	0	0	0	0	0	0	0
7.20	0	0	0	0	0	0	0	0	0	0	0	0
7.25	0	0	0	0	0	0	0	0	0	0	0	0
7.30	0	0	0	0	0	0	0	0	0	0	0	0
7.35	0	0	0	0	0	0	0	0	0	0	0	0
7.40	0	0	0	0	0	0	0	0	0	0	0	0
7.45	0	0	0	0	0	0	0	0	0	0	0	0
7.50	0	0	0	0	0	0	0	0	0	0	0	0
7.55	0	0	0	0	0	0	0	0	0	0	0	0
7.60	3	0	0	0	0	0	0	0	0	0	0	0
7.65	10	0	0	0	0	0	0	0	0	0	0	0
7.70	0	0	0	0	0	0	0	0	0	0	0	0
7.75	133	3	0	0	0	0	0	0	0	0	0	0
7.80	113	2	0	0	0	0	0	0	0	0	0	0
7.85	128	3	0	0	0	0	0	0	0	0	0	0
7.90	279	6	0	0	0	0	0	0	0	0	0	0
7.95	399	8	0	0	0	0	0	0	0	0	0	0
8.00	667	14	0	0	0	0	0	0	0	0	0	0
8.05	798	16	0	0	0	0	0	0	0	0	0	0
8.10	820	17	0	0	0	0	0	0	0	0	0	0
8.15	634	13	0	0	0	0	0	0	0	0	0	0
8.20	414	8	0	0	0	0	0	0	0	0	0	0
8.25	241	5	0	0	0	0	0	0	0	0	0	0
8.30	173	4	0	0	0	0	0	0	0	0	0	0
8.35	91	2	0	0	0	0	0	0	0	0	0	0
8.40	6	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 8.40 = 0

NUMBER OF OBSERVATIONS = 4909

MEAN TEMP = 8.06 DEG. C.

FIG. 13b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

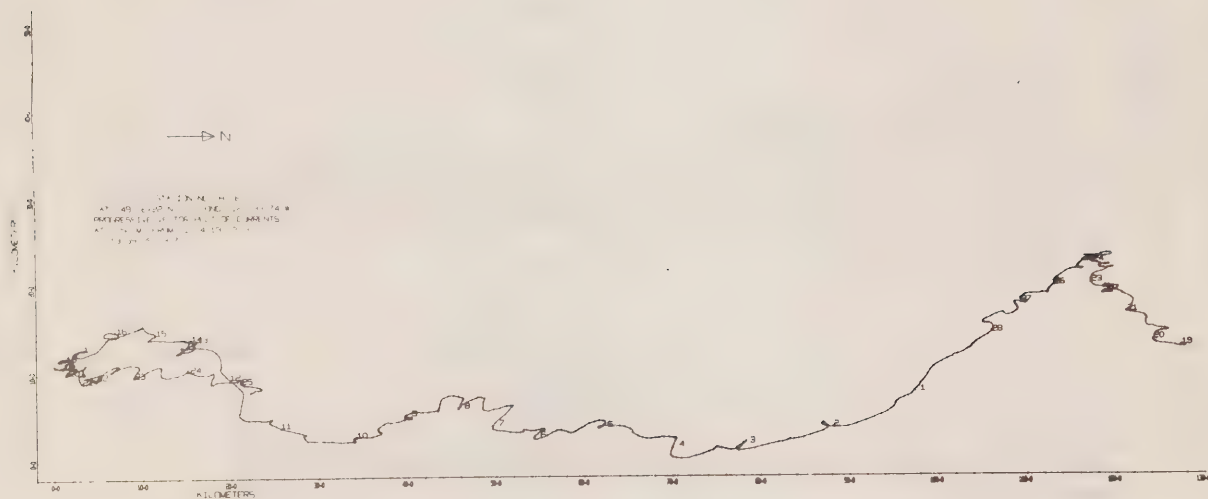


Fig. 13e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 34-day period during February 19 through March 25, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14.13/27/ 4/70 TO 13.15/ 8/ 6/70

MEAN SPEED	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	1	0	0										
20	0	0	0										
30	4	0	0										
40	32	1	0***										
50	46	1	0*****										
60	149	2	0*****										
70	159	3	0*****										
80	400	7	0*****										
90	313	5	0*****										
100	326	5	0*****										
110	528	9	0*****										
120	346	6	0*****										
130	519	9	0*****										
140	345	6	0*****										
150	498	8	0*****										
160	262	4	0*****										
170	248	4	0*****										
180	323	5	0*****										
190	211	3	0*****										
200	307	5	0*****										
210	179	3	0*****										
220	224	4	0*****										
230	109	2	0*****										
240	89	1	0*****										
250	97	2	0*****										
260	68	1	0*****										
270	87	1	0*****										
280	41	1	0****										
290	59	1	0*****										
300	17	0	0**										
310	14	0	0*										
320	15	0	0**										
330	6	0	0*										
340	11	0	0*										
350	3	0	0										
360	5	0	0*										
370	1	0	0										
380	1	0	0										

NUMBER OF SPEEDS GREATER THAN 380 = 0

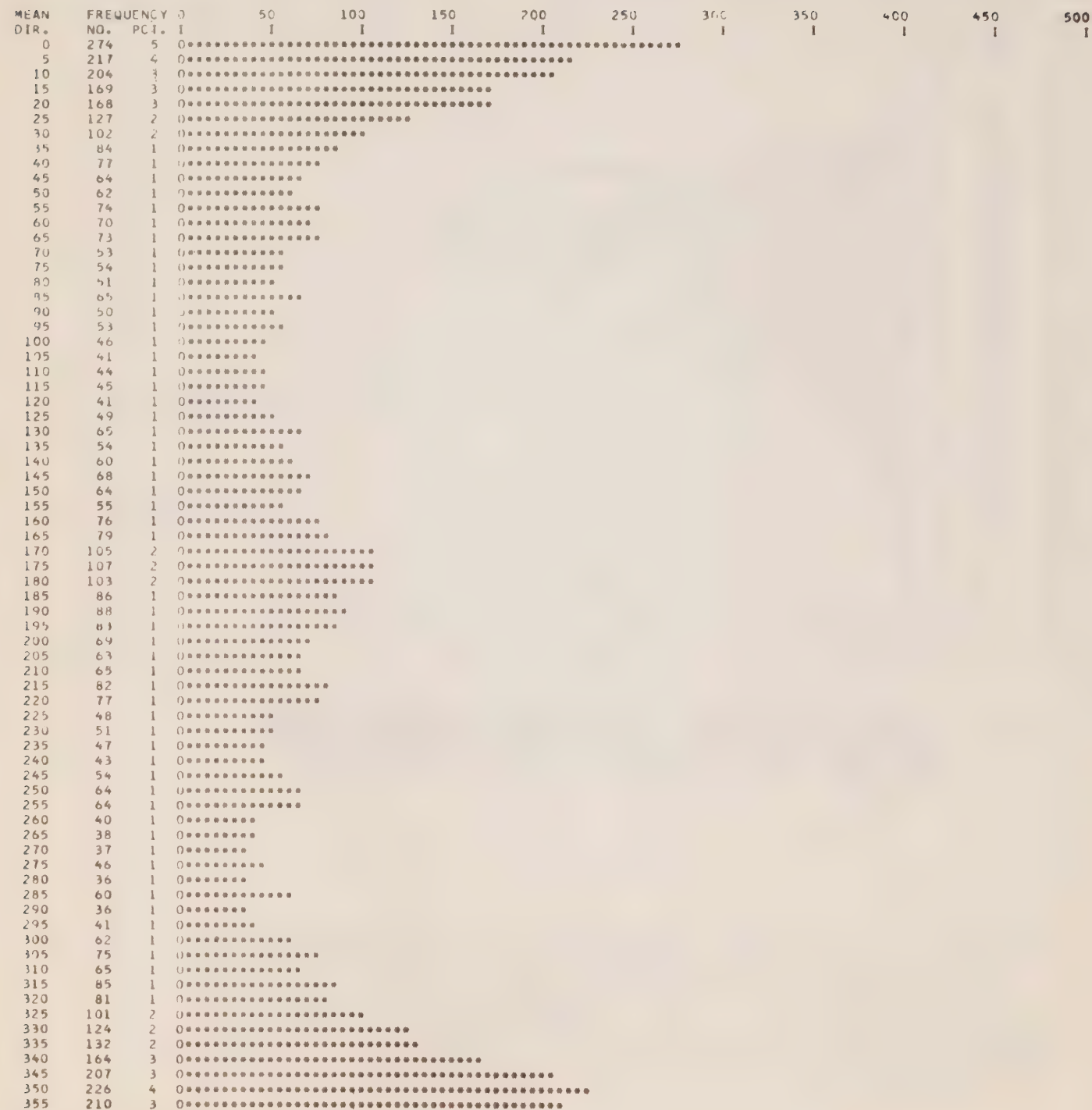
NUMBER OF OBSERVATIONS = 6043

MEAN SPEED = 149 MM/SEC

FIG. 14a. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14.13/27/ 4/70 TO 13.15/ 8/ 6/70



NUMBER OF OBSERVATIONS = 6043

FIG. 14B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970.

STATION NO. H-6 LAT. 49-6-22 N LONG. 123-33-74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 14-13/27/ 4/70 TO 13-15/ 8/ 6/70

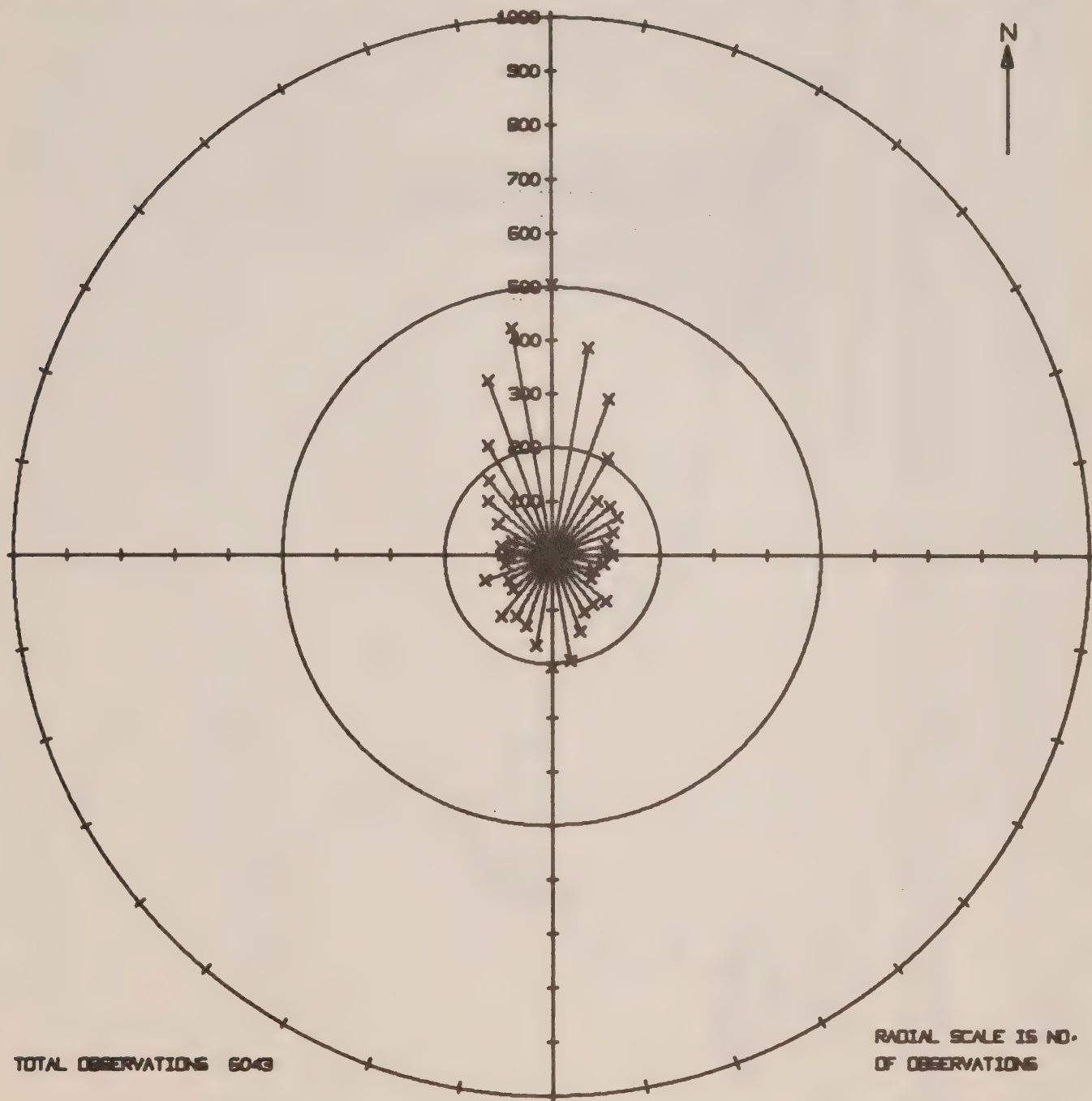


FIG. 14c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 14.13/27/ 4/70 TO 13.15/ 8/ 6/70

MEAN TEMP.	FREQUENCY NO.	PCT.	100	200	300	400	500	600	700	800	900	1000
6.00	0	0	0	0	0	0	0	0	0	0	0	0
6.05	0	0	0	0	0	0	0	0	0	0	0	0
6.10	0	0	0	0	0	0	0	0	0	0	0	0
6.15	0	0	0	0	0	0	0	0	0	0	0	0
6.20	0	0	0	0	0	0	0	0	0	0	0	0
6.25	0	0	0	0	0	0	0	0	0	0	0	0
6.30	0	0	0	0	0	0	0	0	0	0	0	0
6.35	0	0	0	0	0	0	0	0	0	0	0	0
6.40	0	0	0	0	0	0	0	0	0	0	0	0
6.45	0	0	0	0	0	0	0	0	0	0	0	0
6.50	0	0	0	0	0	0	0	0	0	0	0	0
6.55	5	0	0	0	0	0	0	0	0	0	0	0
6.60	48	1	0	0	0	0	0	0	0	0	0	0
6.65	131	2	0	0	0	0	0	0	0	0	0	0
6.70	268	4	0	0	0	0	0	0	0	0	0	0
6.75	724	12	0	0	0	0	0	0	0	0	0	0
6.80	531	9	0	0	0	0	0	0	0	0	0	0
6.85	554	9	0	0	0	0	0	0	0	0	0	0
6.90	939	16	0	0	0	0	0	0	0	0	0	0
6.95	260	4	0	0	0	0	0	0	0	0	0	0
7.00	234	4	0	0	0	0	0	0	0	0	0	0
7.05	487	8	0	0	0	0	0	0	0	0	0	0
7.10	336	6	0	0	0	0	0	0	0	0	0	0
7.15	346	6	0	0	0	0	0	0	0	0	0	0
7.20	225	4	0	0	0	0	0	0	0	0	0	0
7.25	440	7	0	0	0	0	0	0	0	0	0	0
7.30	153	3	0	0	0	0	0	0	0	0	0	0
7.35	91	2	0	0	0	0	0	0	0	0	0	0
7.40	125	2	0	0	0	0	0	0	0	0	0	0
7.45	65	1	0	0	0	0	0	0	0	0	0	0
7.50	33	1	0	0	0	0	0	0	0	0	0	0
7.55	22	0	0	0	0	0	0	0	0	0	0	0
7.60	10	0	0	0	0	0	0	0	0	0	0	0
7.65	7	0	0	0	0	0	0	0	0	0	0	0
7.70	0	0	0	0	0	0	0	0	0	0	0	0
7.75	1	0	0	0	0	0	0	0	0	0	0	0
7.80	0	0	0	0	0	0	0	0	0	0	0	0
7.85	1	0	0	0	0	0	0	0	0	0	0	0
7.90	0	0	0	0	0	0	0	0	0	0	0	0
7.95	0	0	0	0	0	0	0	0	0	0	0	0
8.00	3	0	0	0	0	0	0	0	0	0	0	0
8.05	1	0	0	0	0	0	0	0	0	0	0	0
8.10	0	0	0	0	0	0	0	0	0	0	0	0
8.15	0	0	0	0	0	0	0	0	0	0	0	0
8.20	0	0	0	0	0	0	0	0	0	0	0	0
8.25	0	0	0	0	0	0	0	0	0	0	0	0
8.30	0	0	0	0	0	0	0	0	0	0	0	0
8.35	0	0	0	0	0	0	0	0	0	0	0	0
8.40	0	0	0	0	0	0	0	0	0	0	0	0
8.45	0	0	0	0	0	0	0	0	0	0	0	0
8.50	0	0	0	0	0	0	0	0	0	0	0	0
8.55	0	0	0	0	0	0	0	0	0	0	0	0
8.60	0	0	0	0	0	0	0	0	0	0	0	0
8.65	0	0	0	0	0	0	0	0	0	0	0	0
8.70	0	0	0	0	0	0	0	0	0	0	0	0
8.75	0	0	0	0	0	0	0	0	0	0	0	0
8.80	0	0	0	0	0	0	0	0	0	0	0	0
8.85	0	0	0	0	0	0	0	0	0	0	0	0
8.90	0	0	0	0	0	0	0	0	0	0	0	0
8.95	0	0	0	0	0	0	0	0	0	0	0	0
9.00	0	0	0	0	0	0	0	0	0	0	0	0
9.05	0	0	0	0	0	0	0	0	0	0	0	0
9.10	0	0	0	0	0	0	0	0	0	0	0	0
9.15	0	0	0	0	0	0	0	0	0	0	0	0
9.20	0	0	0	0	0	0	0	0	0	0	0	0
9.25	0	0	0	0	0	0	0	0	0	0	0	0
9.30	0	0	0	0	0	0	0	0	0	0	0	0
9.35	0	0	0	0	0	0	0	0	0	0	0	0
9.40	0	0	0	0	0	0	0	0	0	0	0	0
9.45	0	0	0	0	0	0	0	0	0	0	0	0
9.50	0	0	0	0	0	0	0	0	0	0	0	0
9.55	0	0	0	0	0	0	0	0	0	0	0	0
9.60	0	0	0	0	0	0	0	0	0	0	0	0
9.65	0	0	0	0	0	0	0	0	0	0	0	0
9.70	0	0	0	0	0	0	0	0	0	0	0	0
9.75	0	0	0	0	0	0	0	0	0	0	0	0
9.80	0	0	0	0	0	0	0	0	0	0	0	0
9.85	0	0	0	0	0	0	0	0	0	0	0	0
9.90	0	0	0	0	0	0	0	0	0	0	0	0
9.95	0	0	0	0	0	0	0	0	0	0	0	0
10.00	0	0	0	0	0	0	0	0	0	0	0	0
10.05	0	0	0	0	0	0	0	0	0	0	0	0
10.10	0	0	0	0	0	0	0	0	0	0	0	0
10.15	0	0	0	0	0	0	0	0	0	0	0	0
10.20	0	0	0	0	0	0	0	0	0	0	0	0
10.25	0	0	0	0	0	0	0	0	0	0	0	0
10.30	0	0	0	0	0	0	0	0	0	0	0	0
10.35	1	0	0	0	0	0	0	0	0	0	0	0
10.40	0	0	0	0	0	0	0	0	0	0	0	0
10.45	0	0	0	0	0	0	0	0	0	0	0	0
10.50	0	0	0	0	0	0	0	0	0	0	0	0
10.55	0	0	0	0	0	0	0	0	0	0	0	0
10.60	0	0	0	0	0	0	0	0	0	0	0	0
10.65	0	0	0	0	0	0	0	0	0	0	0	0
10.70	0	0	0	0	0	0	0	0	0	0	0	0
10.75	0	0	0	0	0	0	0	0	0	0	0	0
10.80	0	0	0	0	0	0	0	0	0	0	0	0
10.85	0	0	0	0	0	0	0	0	0	0	0	0
10.90	0	0	0	0	0	0	0	0	0	0	0	0
10.95	0	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 10.95 = 2

NUMBER OF OBSERVATIONS = 6043

MEAN TEMP = 6.97 DEG. C.

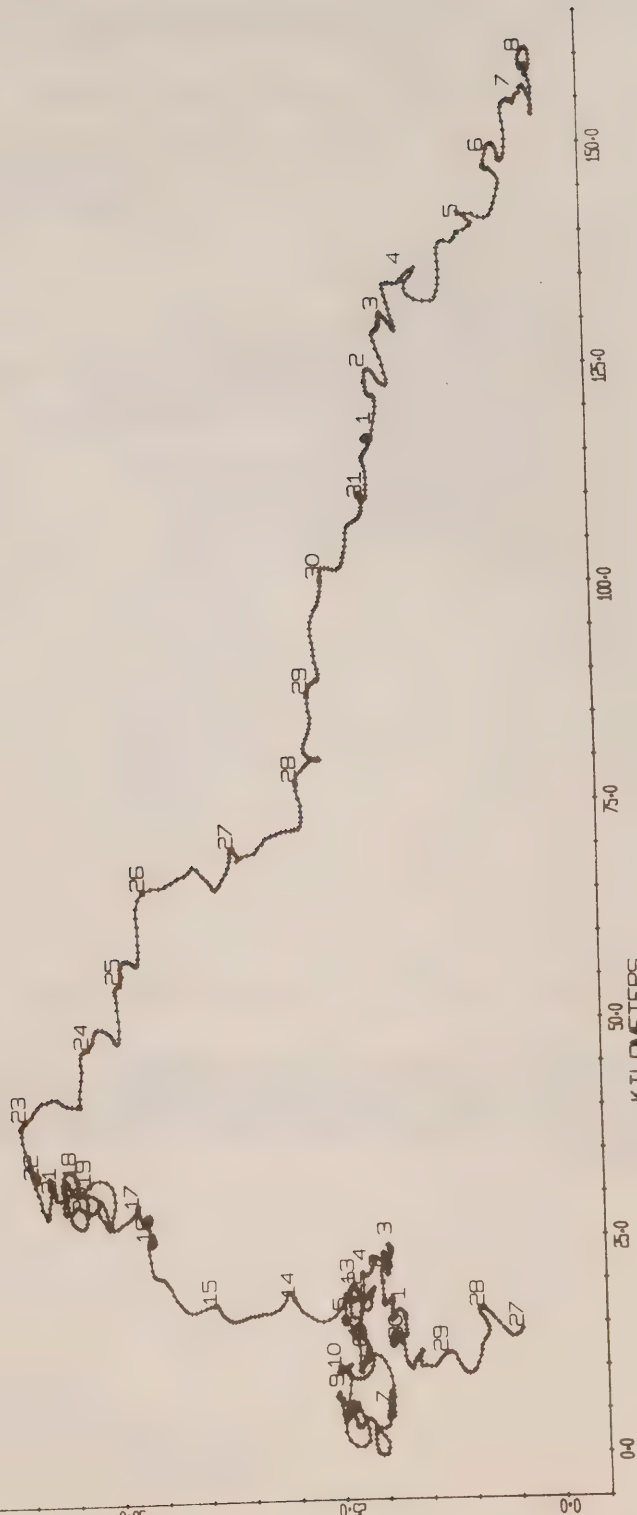
FIG. 14b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970.



STATION NO. H- 6
 LAT. 49- 6.22 N LONG. 123-33.74 W
 PROGRESSIVE VECTOR PLOT OF CURRENTS
 AT 50 M. FROM 14.13/27/ 4/70
 TO 13.15/ 8/ 6/70

KILOMETERS

KILOMETERS



A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 42-day period during April 27 through June 8, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

Fig. 14e.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9. 5/10/ 6/70 TO 12.18/27/ 7/70

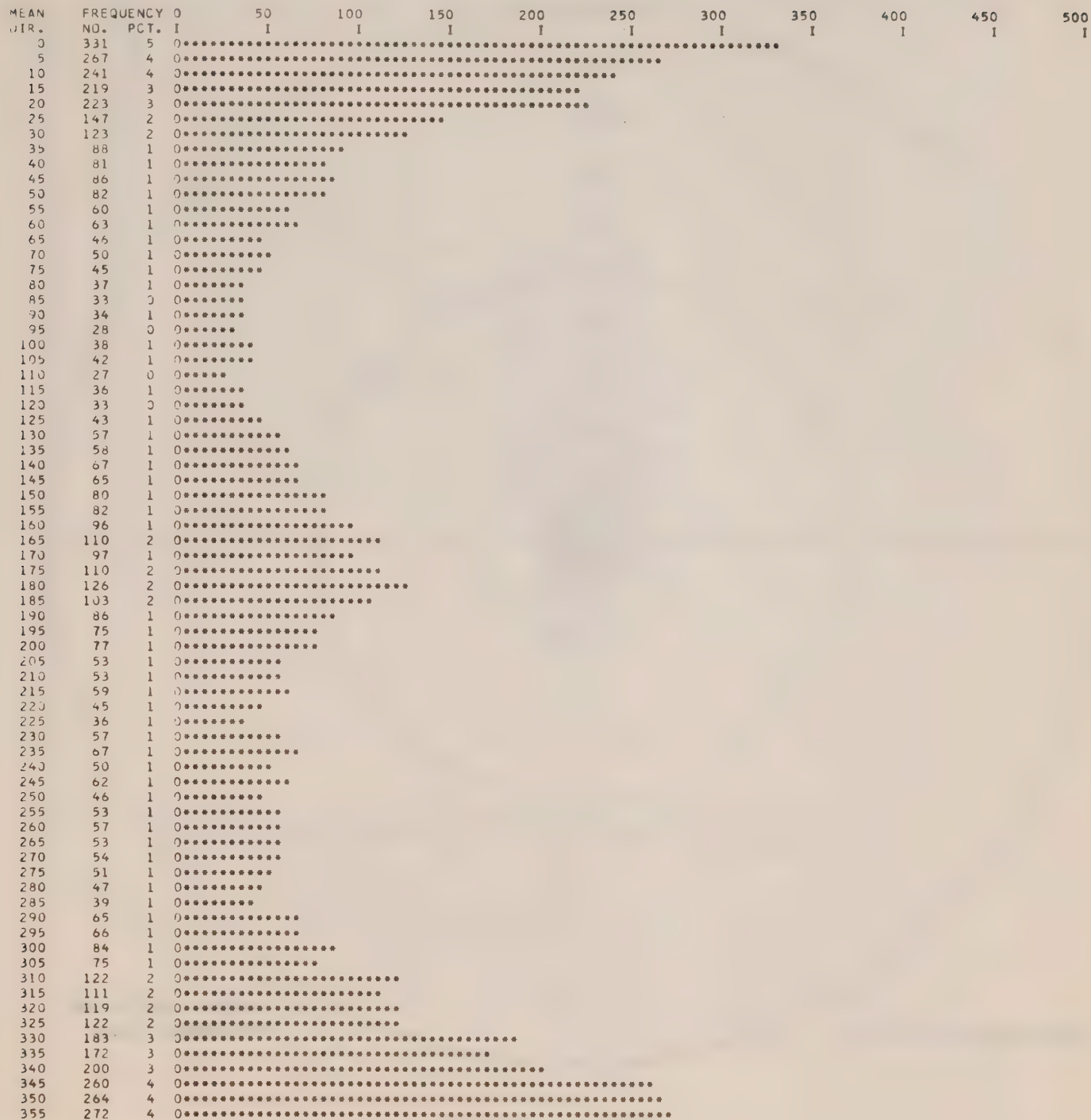
MEAN SPEED	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	0	0	0									
10	0	0	0									
20	0	0	0									
30	1	0	0									
40	8	0	0*									
50	46	1	0*****									
60	164	2	0*****									
70	179	3	0*****									
80	272	4	0*****									
90	213	3	0*****									
100	252	4	0*****									
110	461	7	0*****									
120	348	5	0*****									
130	647	10	0*****									
140	459	7	0*****									
150	516	8	0*****									
160	290	4	0*****									
170	282	4	0*****									
180	450	7	0*****									
190	298	4	0*****									
200	382	6	0*****									
210	299	4	0*****									
220	389	6	0*****									
230	166	2	0*****									
240	124	2	0*****									
250	158	2	0*****									
260	68	1	0*****									
270	74	1	0*****									
280	60	1	0*****									
290	60	1	0*****									
300	27	0	0***									
310	20	0	0**									
320	24	0	0**									
330	15	0	0**									
340	10	0	0*									
350	8	0	0*									
360	3	0	0									
370	6	0	0*									
380	1	0	0									
390	1	0	0									
400	1	0	0									
410	3	0	0									
420	0	0	0									
430	1	0	0									
440	3	0	0									

NUMBER OF SPEEDS GREATER THAN 440 = 0 NUMBER OF OBSERVATIONS = 6789 MEAN SPEED = 159 MM/SEC

FIG. 15A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 47-DAY PERIOD DURING JUNE 10 THROUGH JULY 27, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9. 5/10/ 6/70 TO 12.18/27/ 7/70



NUMBER OF OBSERVATIONS = 6789

FIG. 15b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 47-DAY PERIOD DURING JUNE 10 THROUGH JULY 27, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 9. 5/10/ 6/70 TO 12.18/27/ 7/70

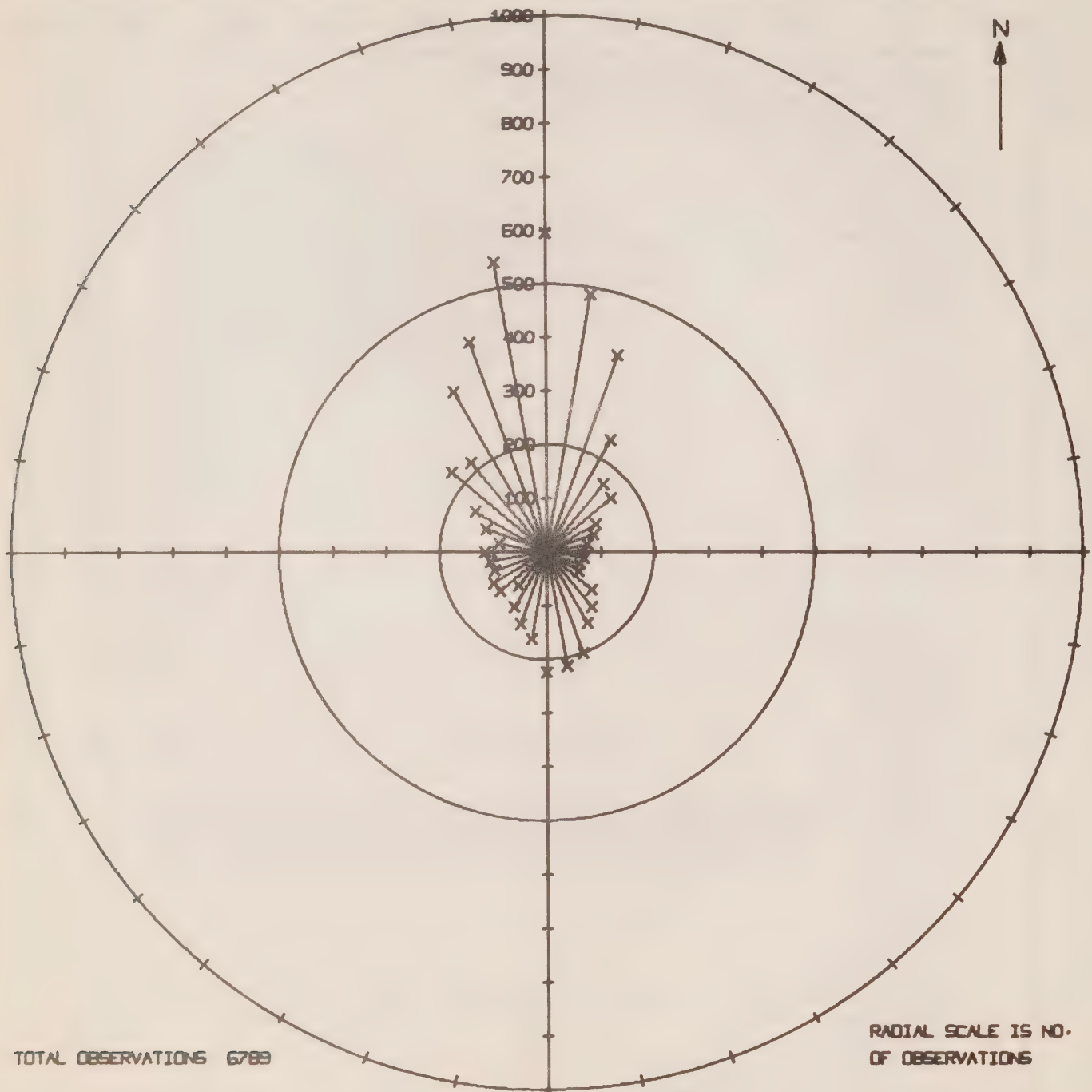


FIG. 15c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 47-DAY PERIOD DURING JUNE 10 THROUGH JULY 27, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 9. 5/10/ 6/70 TO 12.18/27/ 7/70

MEAN TEMP.	FREQUENCY NO.	0 PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
7.00	16	0	0**									
7.05	22	0	0**									
7.10	15	0	0**									
7.15	45	1	0*****									
7.20	57	1	0*****									
7.25	164	2	0*****									
7.30	145	2	0*****									
7.35	116	2	0*****									
7.40	270	4	0*****									
7.45	156	2	0*****									
7.50	185	3	0*****									
7.55	284	4	0*****									
7.60	168	2	0*****									
7.65	198	3	0*****									
7.70	291	4	0*****									
7.75	225	3	0*****									
7.80	158	2	0*****									
7.85	356	5	0*****									
7.90	152	2	0*****									
7.95	152	2	0*****									
8.00	192	3	0*****									
8.05	519	8	0*****									
8.10	282	4	0*****									
8.15	283	4	0*****									
8.20	543	8	0*****									
8.25	184	3	0*****									
8.30	226	3	0*****									
8.35	420	6	0*****									
8.40	166	2	0*****									
8.45	156	2	0*****									
8.50	276	4	0*****									
8.55	60	1	0*****									
8.60	47	1	0*****									
8.65	37	1	0****									
8.70	73	1	0*****									
8.75	21	0	0**									
8.80	19	0	0**									
8.85	24	0	0**									
8.90	9	0	0*									
8.95	19	0	0**									
9.00	29	0	0***									
9.05	8	0	0*									
9.10	5	0	0*									
9.15	6	0	0*									
9.20	1	0	0									

NUMBER OF TEMP. GREATER THAN 7.25 = 0

NUMBER OF OBSERVATIONS = 6789

MEAN TEMP = 7.96 DEG. C.

FIG. 15b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 47-DAY PERIOD DURING JUNE 10 THROUGH JULY 27, 1970.

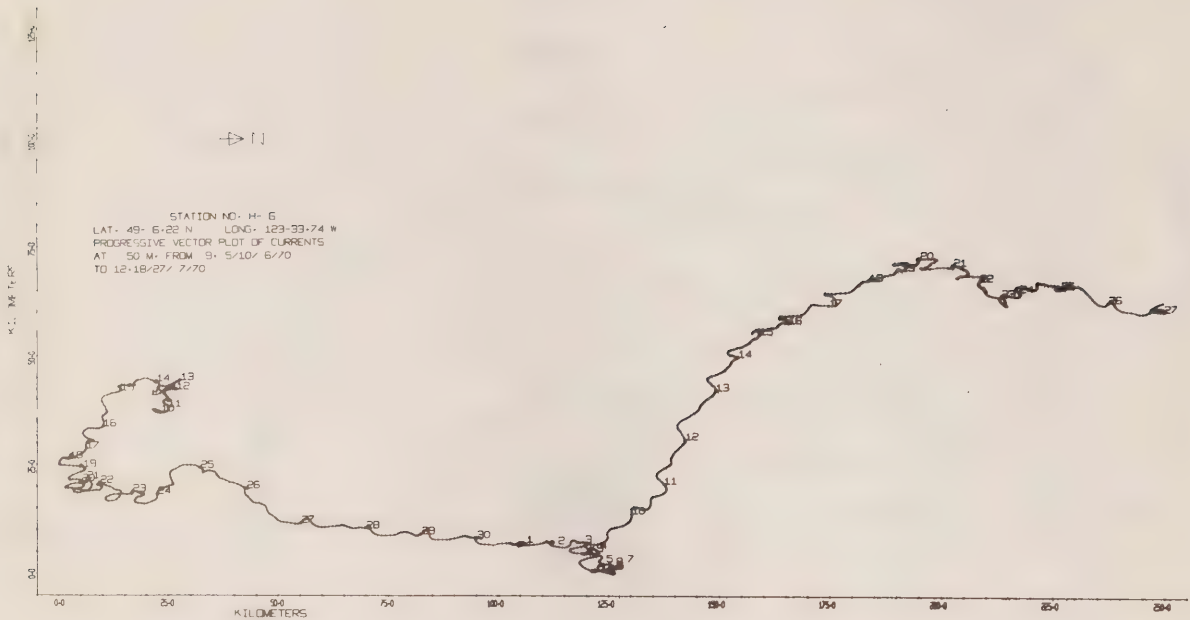


Fig. 15e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 47-day period during June 10 through July 27, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 16. 9/27/ 7/70 TO 14.25/24/ 9/70

MEAN SPEED	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	0	0	0										
20	0	0	0										
30	0	0	0										
40	4	0	0										
50	29	0	0***										
60	106	1	0*****										
70	118	1	0*****										
80	373	4	0*****										
90	342	4	0*****										
100	339	4	0*****										
110	562	7	0*****										
120	401	5	0*****										
130	684	8	0*****										
140	526	6	0*****										
150	813	10	0*****										
160	458	5	0*****										
170	482	6	0*****										
180	695	8	0*****										
190	352	4	0*****										
200	439	5	0*****										
210	275	3	0*****										
220	347	4	0*****										
230	184	2	0*****										
240	160	2	0*****										
250	230	3	0*****										
260	102	1	0*****										
270	115	1	0*****										
280	51	1	0*****										
290	60	1	0*****										
300	25	0	0***										
310	19	0	0**										
320	30	0	0***										
330	15	0	0**										
340	25	0	0***										
350	16	0	0**										
360	17	0	0**										
370	13	0	0*										
380	10	0	0*										
390	9	0	0*										
400	6	0	0*										
410	8	0	0*										
420	7	0	0*										
430	7	0	0*										
440	7	0	0*										
450	1	0	0										
460	5	0	0*										
470	3	0	0										
480	6	0	0*										
490	6	0	0*										
500	3	0	0										
510	1	0	0										
520	1	0	0										

NUMBER OF SPEEDS GREATER THAN 520 = 0

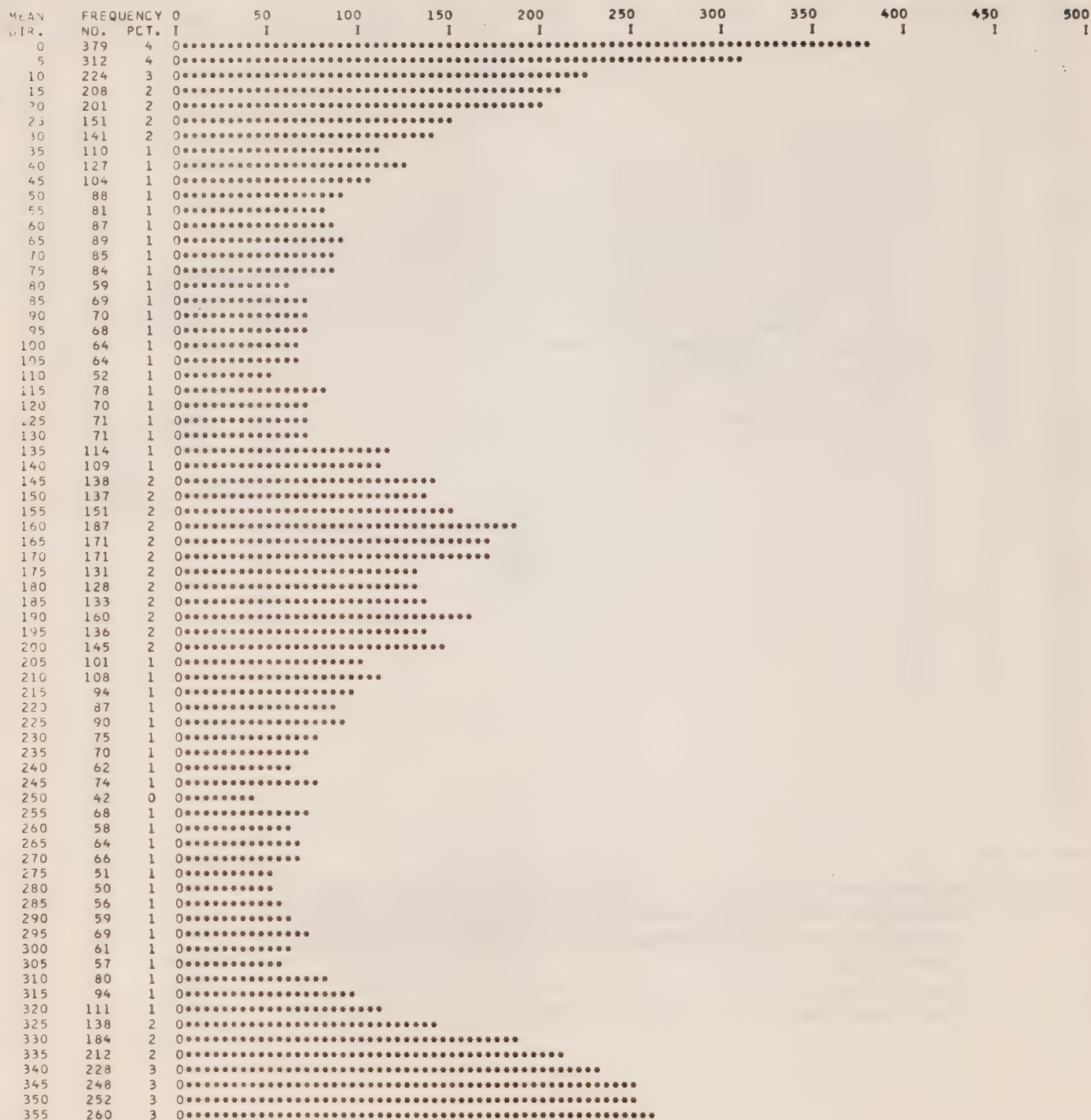
NUMBER OF OBSERVATIONS = 8487

MEAN SPEED = 163 MM/SEC

FIG. 16A. A-HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 59-DAY PERIOD DURING JULY 27 THROUGH SEPTEMBER 24, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 16. 9/27/ 7/70 TO 14.25/24/ 9/70



NUMBER OF OBSERVATIONS = 8487

FIG. 16B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 59-DAY PERIOD DURING JULY 27 THROUGH SEPTEMBER 24, 1970.

STATION NO. H-6 LAT. 49° 6.22' N LONG. 123° 33.74' W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 16. 9/27/ 7/70 TO 14.25/24/ 9/70

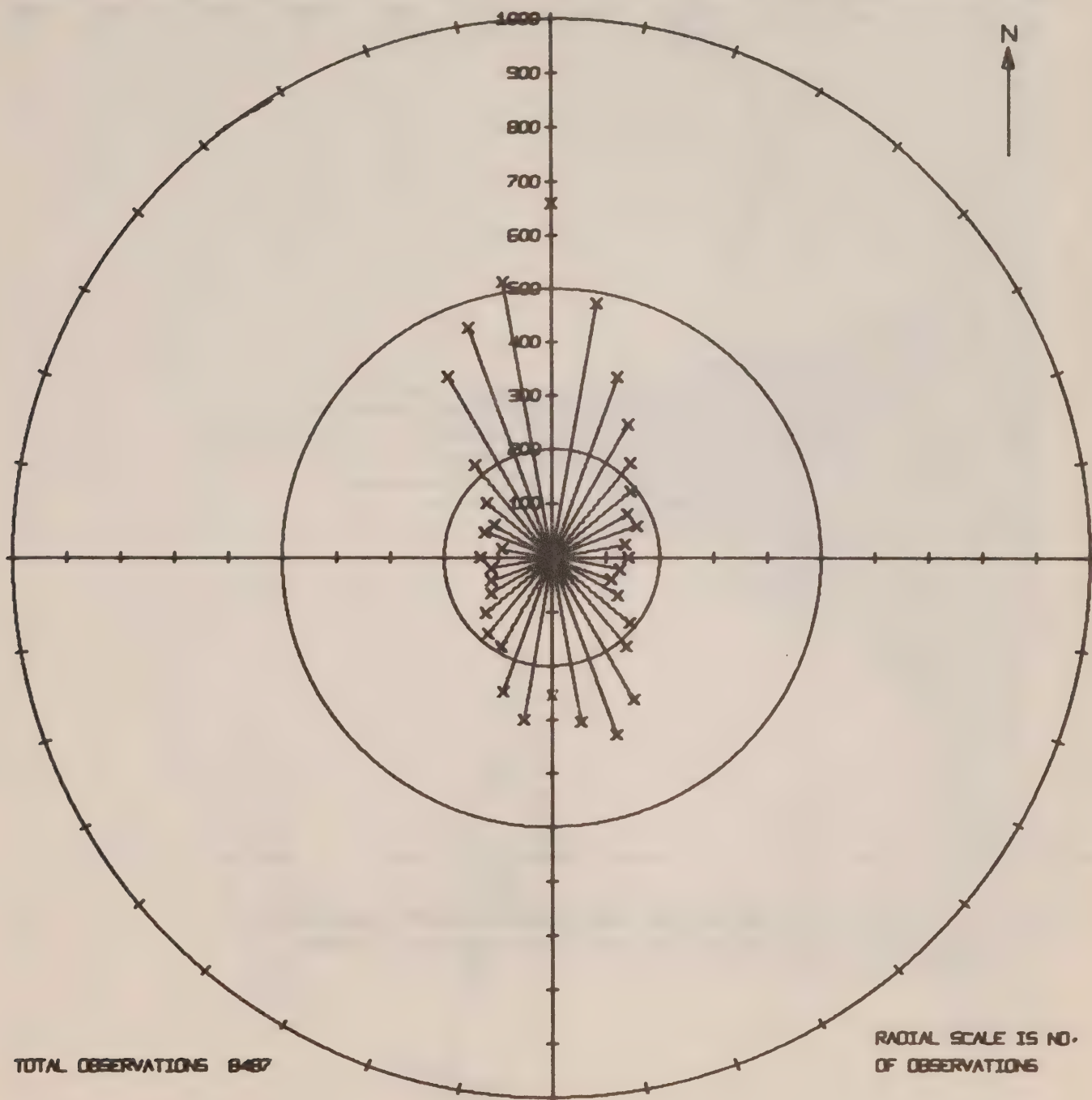


FIG. 16c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 47-DAY PERIOD DURING JULY 27 THROUGH SEPTEMBER 24, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 16. 9/27/ 7/70 TO 14.25/24/ 9/70

MEAN TEMP.	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
			I	I	I	I	I	I	I	I	I	I	I
3.00	0	0	0										
3.05	0	0	0										
3.10	0	0	0										
3.15	0	0	0										
3.20	0	0	0										
3.25	0	0	0										
3.30	0	0	0										
3.35	0	0	0										
3.40	0	0	0										
3.45	0	0	0										
3.50	0	0	0										
3.55	0	0	0										
3.60	0	0	0										
3.65	0	0	0										
3.70	0	0	0										
3.75	5	0	0*										
3.80	20	0	0**										
3.85	51	1	0*****										
3.90	57	1	0*****										
3.95	131	2	0*****										
4.00	220	3	0*****										
4.05	257	3	0*****										
4.10	337	4	0*****										
4.15	588	7	0*****										
4.20	690	8	0*****										
4.25	793	9	0*****										
4.30	586	7	0*****										
4.35	572	7	0*****										
4.40	516	6	0*****										
4.45	644	8	0*****										
4.50	568	7	0*****										
4.55	484	6	0*****										
4.60	401	5	0*****										
4.65	180	2	0*****										
4.70	277	3	0*****										
4.75	249	3	0*****										
4.80	193	2	0*****										
4.85	182	2	0*****										
4.90	130	2	0*****										
4.95	118	1	0*****										
5.00	91	1	0*****										
5.05	46	1	0*****										
5.10	40	0	0****										
5.15	21	0	0**										
5.20	11	0	0*										
5.25	11	0	0*										
5.30	9	0	0*										
5.35	6	0	0*										
5.40	1	0	0										
5.45	1	0	0										
5.50	0	0	0										
5.55	1	0	0										

NUMBER OF TEMP. GREATER THAN 5.55 = 0

NUMBER OF OBSERVATIONS = 8487

MEAN TEMP = 4.40 DEG. C.

FIG. 16d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 59-DAY PERIOD DURING JULY 27 THROUGH SEPTEMBER 24, 1970.

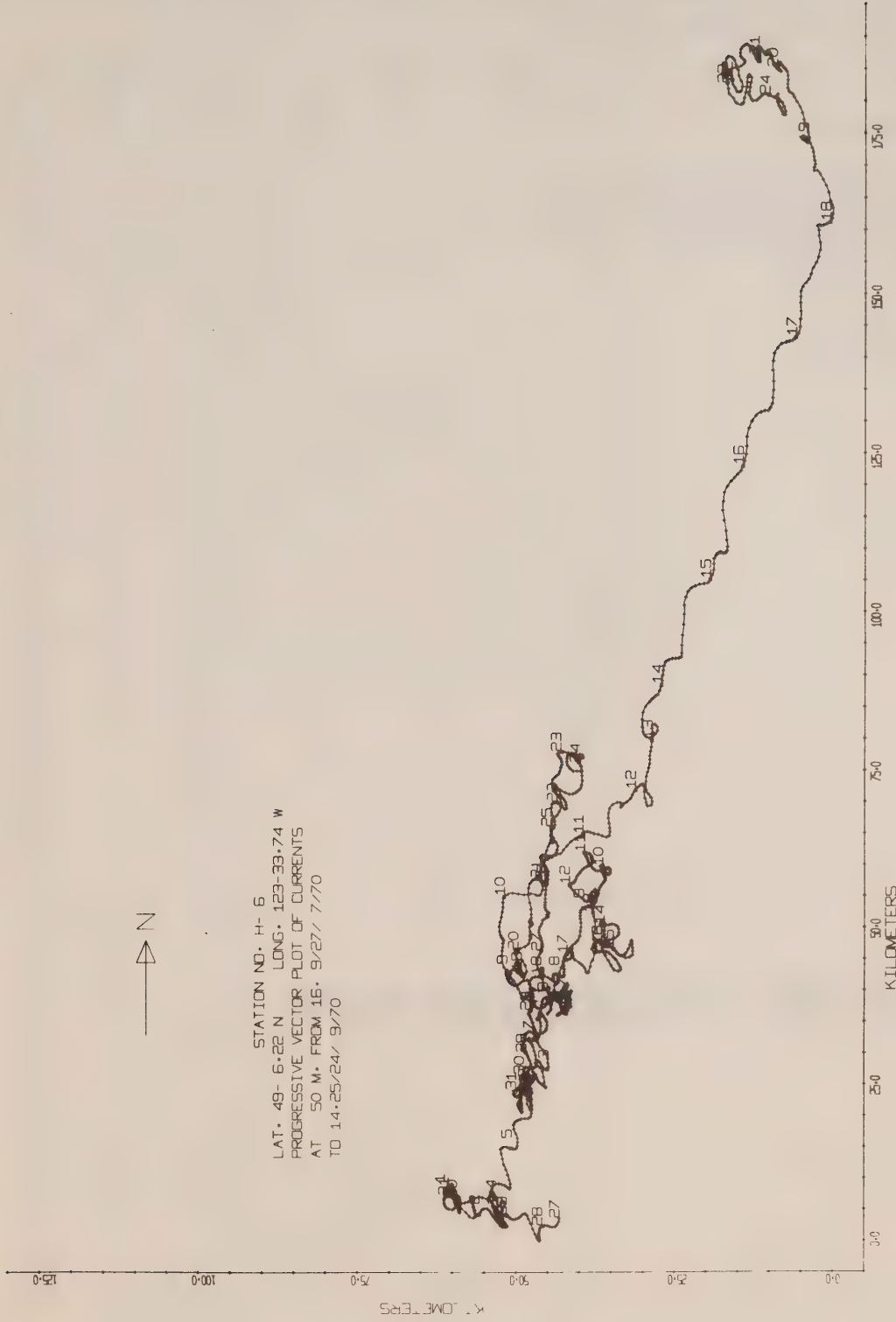


Fig. 16e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 59-day period during July 27 through September 24, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 13.45/16/ 4/69 TO 15.45/22/ 4/69

MEAN SPEED	FREQUENCY NO.	PCT. I	0	20	40	60	80	100	120	140	160	180	200
0	0	0	0	I	I	I	I	I	I	I	I	I	I
10	42	5	0	*****									
20	17	2	0	*****									
30	35	4	0	*****									
40	59	10	0	*****									
50	74	8	0	*****									
60	103	12	0	*****									
70	64	7	0	*****									
80	66	8	0	*****									
90	41	5	0	*****									
100	39	4	0	*****									
110	30	3	0	*****									
120	18	2	0	*****									
130	52	6	0	*****									
140	34	4	0	*****									
150	40	5	0	*****									
160	13	1	0	*****									
170	17	2	0	*****									
180	24	3	0	*****									
190	11	1	0	*****									
200	20	2	0	*****									
210	12	1	0	*****									
220	14	2	0	*****									
230	7	1	0	*****									
240	1	0	0										
250	4	0	0										
260	3	0	0										
270	1	0	0										
280	3	0	0										
290	0	0	0										
300	0	0	0										
310	0	0	0										
320	0	0	0										
330	0	0	0										
340	0	0	0										
350	0	0	0										
360	0	0	0										
370	0	0	0										
380	0	0	0										
390	0	0	0										
400	0	0	0										
410	0	0	0										
420	0	0	0										
430	0	0	0										
440	0	0	0										
450	1	0	0										

NUMBER OF SPEEDS GREATER THAN 450 = 0

NUMBER OF OBSERVATIONS = 877

MEAN SPEED = 93 MM/SEC

FIG. 17A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N. LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 13.45/16/ 4/69 TO 15.45/22/ 4/69

MEAN DIR.	FREQUENCY NO.	PCT. I	0	10	20	30	40	50	60	70	80	90	100
0	27	3	0	1	1	1	1	1	1	1	1	1	1
5	11	1	0	1	1	1	1	1	1	1	1	1	1
10	10	1	0	1	1	1	1	1	1	1	1	1	1
15	5	1	0	1	1	1	1	1	1	1	1	1	1
20	16	2	0	1	1	1	1	1	1	1	1	1	1
25	7	1	0	1	1	1	1	1	1	1	1	1	1
30	6	1	0	1	1	1	1	1	1	1	1	1	1
35	13	1	0	1	1	1	1	1	1	1	1	1	1
40	10	1	0	1	1	1	1	1	1	1	1	1	1
45	7	1	0	1	1	1	1	1	1	1	1	1	1
50	10	1	0	1	1	1	1	1	1	1	1	1	1
55	15	2	0	1	1	1	1	1	1	1	1	1	1
60	13	1	0	1	1	1	1	1	1	1	1	1	1
65	12	1	0	1	1	1	1	1	1	1	1	1	1
70	15	2	0	1	1	1	1	1	1	1	1	1	1
75	8	1	0	1	1	1	1	1	1	1	1	1	1
80	11	1	0	1	1	1	1	1	1	1	1	1	1
85	11	1	0	1	1	1	1	1	1	1	1	1	1
90	22	3	0	1	1	1	1	1	1	1	1	1	1
95	24	3	0	1	1	1	1	1	1	1	1	1	1
100	27	3	0	1	1	1	1	1	1	1	1	1	1
105	28	3	0	1	1	1	1	1	1	1	1	1	1
110	15	2	0	1	1	1	1	1	1	1	1	1	1
115	20	2	0	1	1	1	1	1	1	1	1	1	1
120	22	3	0	1	1	1	1	1	1	1	1	1	1
125	19	2	0	1	1	1	1	1	1	1	1	1	1
130	9	1	0	1	1	1	1	1	1	1	1	1	1
135	17	1	0	1	1	1	1	1	1	1	1	1	1
140	8	1	0	1	1	1	1	1	1	1	1	1	1
145	6	1	0	1	1	1	1	1	1	1	1	1	1
150	5	1	0	1	1	1	1	1	1	1	1	1	1
155	10	1	0	1	1	1	1	1	1	1	1	1	1
160	5	1	0	1	1	1	1	1	1	1	1	1	1
165	6	1	0	1	1	1	1	1	1	1	1	1	1
170	12	1	0	1	1	1	1	1	1	1	1	1	1
175	6	1	0	1	1	1	1	1	1	1	1	1	1
180	4	0	0	1	1	1	1	1	1	1	1	1	1
185	4	0	0	1	1	1	1	1	1	1	1	1	1
190	6	1	0	1	1	1	1	1	1	1	1	1	1
195	3	0	0	1	1	1	1	1	1	1	1	1	1
200	4	0	0	1	1	1	1	1	1	1	1	1	1
205	2	0	0	1	1	1	1	1	1	1	1	1	1
210	4	0	0	1	1	1	1	1	1	1	1	1	1
215	3	0	0	1	1	1	1	1	1	1	1	1	1
220	6	1	0	1	1	1	1	1	1	1	1	1	1
225	3	0	0	1	1	1	1	1	1	1	1	1	1
230	7	1	0	1	1	1	1	1	1	1	1	1	1
235	5	1	0	1	1	1	1	1	1	1	1	1	1
240	8	1	0	1	1	1	1	1	1	1	1	1	1
245	8	1	0	1	1	1	1	1	1	1	1	1	1
250	8	1	0	1	1	1	1	1	1	1	1	1	1
255	4	0	0	1	1	1	1	1	1	1	1	1	1
260	8	1	0	1	1	1	1	1	1	1	1	1	1
265	10	1	0	1	1	1	1	1	1	1	1	1	1
270	7	1	0	1	1	1	1	1	1	1	1	1	1
275	11	1	0	1	1	1	1	1	1	1	1	1	1
280	14	2	0	1	1	1	1	1	1	1	1	1	1
285	5	1	0	1	1	1	1	1	1	1	1	1	1
290	10	1	0	1	1	1	1	1	1	1	1	1	1
295	9	1	0	1	1	1	1	1	1	1	1	1	1
300	19	2	0	1	1	1	1	1	1	1	1	1	1
305	25	3	0	1	1	1	1	1	1	1	1	1	1
310	18	2	0	1	1	1	1	1	1	1	1	1	1
315	24	3	0	1	1	1	1	1	1	1	1	1	1
320	27	3	0	1	1	1	1	1	1	1	1	1	1
325	18	2	0	1	1	1	1	1	1	1	1	1	1
330	24	3	0	1	1	1	1	1	1	1	1	1	1
335	28	3	0	1	1	1	1	1	1	1	1	1	1
340	31	4	0	1	1	1	1	1	1	1	1	1	1
345	19	2	0	1	1	1	1	1	1	1	1	1	1
350	22	3	0	1	1	1	1	1	1	1	1	1	1
355	12	1	0	1	1	1	1	1	1	1	1	1	1

NUMBER OF OBSERVATIONS = 877

FIG. 17B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 13.45/16/ 4/69 TO 15.45/22/ 4/69

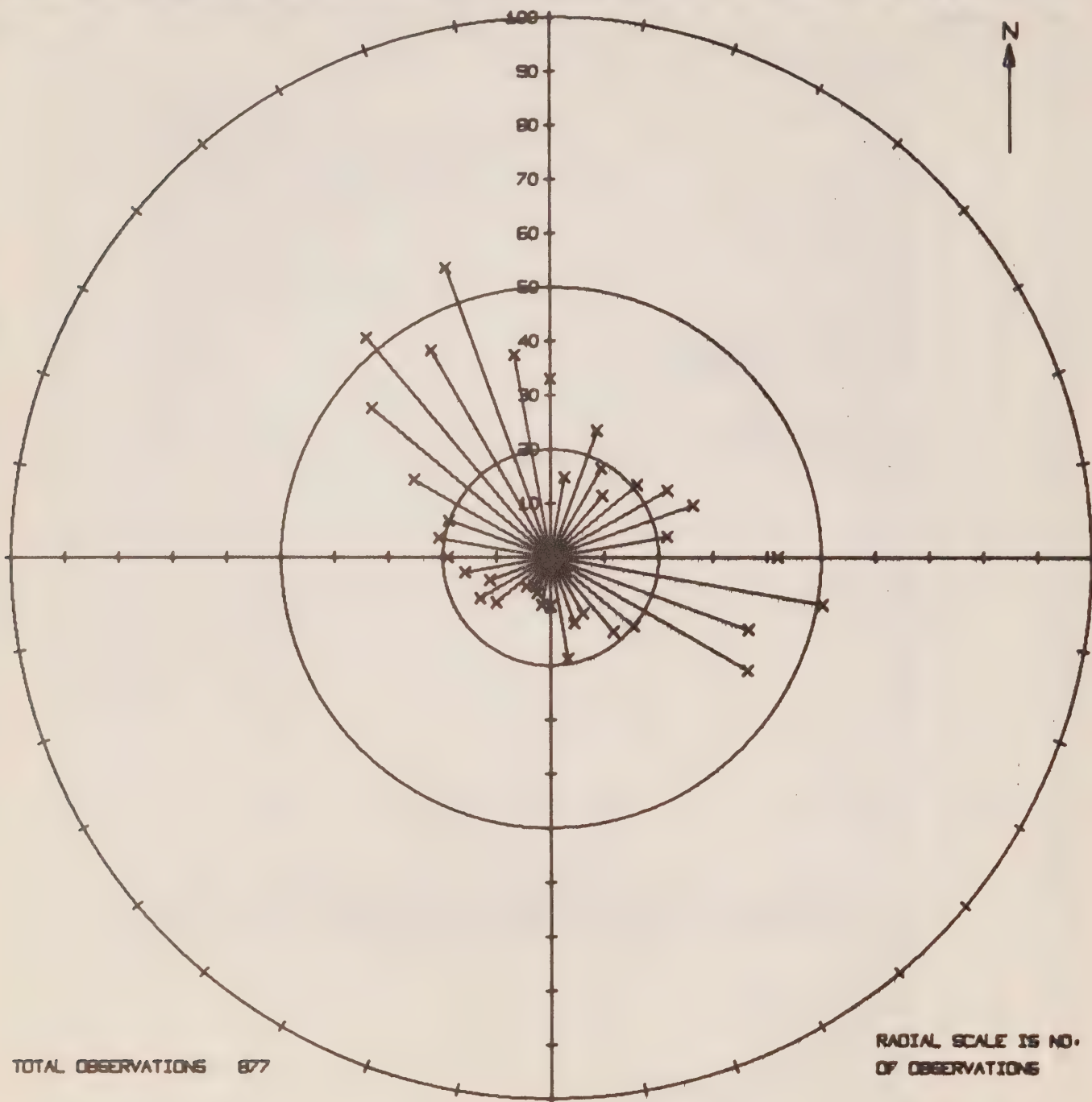


FIG. 17c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969.

STATION NO. 4-6 LAT. 49- 6.20 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 13.45/16/ 4/69 TO 15.45/22/ 4/69

TEMP.	FREQUENCY NO.	PCT. I	20 I	40 I	60 I	80 I	100 I	120 I	140 I	160 I	180 I	200 I
7.05	0	0										
7.10	0	0										
7.15	0	0										
7.20	0	0										
7.25	0	0										
7.30	0	0										
7.35	0	0										
7.40	0	0										
7.45	0	0										
7.50	0	0										
7.55	3	0										
7.60	24	3										
7.65	36	4										
7.70	47	5										
7.75	51	6										
7.80	61	8										
7.85	106	12										
7.90	103	12										
7.95	124	14										
8.00	101	12										
8.05	108	12										
8.10	68	8										
8.15	32	4										
8.20	26	3										
8.25	2	0										

NUMBER OF TEMP. GREATER THAN 8.25 = 0 NUMBER OF OBSERVATIONS = 877 MEAN TEMP = 7.92 DEG. C.

FIG. 17d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969.

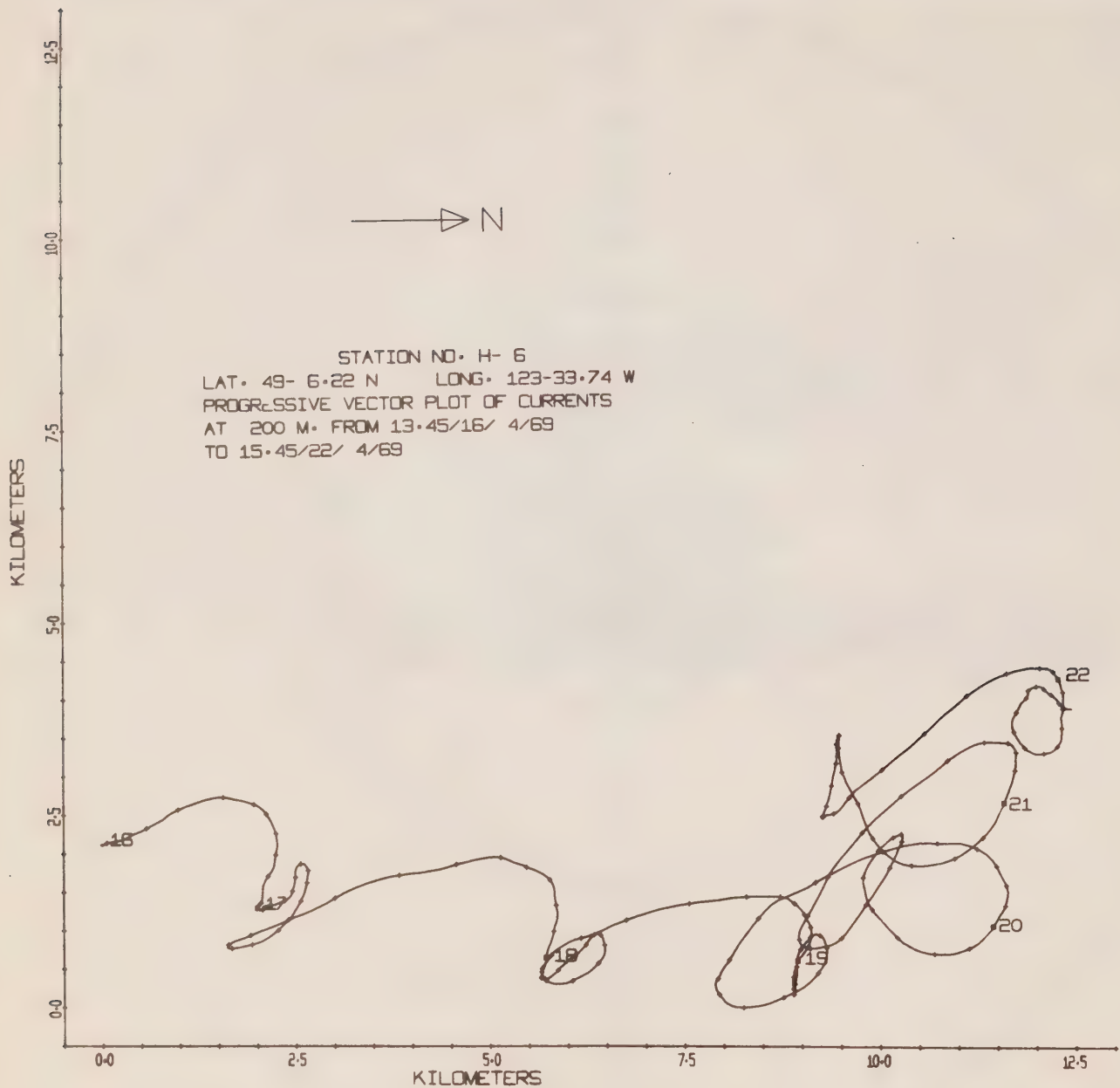


Fig. 17e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 6-day period during April 16 through April 22, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. 4- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 9. 9/10/ 7/69 TO 16. 9/28/ 8/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
0	0	0	0										
10	348	5	0	*****									
20	140	2	0	*****									
30	181	3	0	*****									
40	492	7	0	*****									
50	430	6	0	*****									
60	713	10	0	*****									
70	504	7	0	*****									
80	668	9	0	*****									
90	342	5	0	*****									
100	352	5	0	*****									
110	388	5	0	*****									
120	242	3	0	*****									
130	352	5	0	*****									
140	213	3	0	*****									
150	305	4	0	*****									
160	189	3	0	*****									
170	153	2	0	*****									
180	207	3	0	*****									
190	124	2	0	*****									
200	155	2	0	*****									
210	81	1	0	*****									
220	100	1	0	*****									
230	84	1	0	*****									
240	43	1	0	****									
250	66	1	0	*****									
260	39	1	0	****									
270	41	1	0	****									
280	34	0	0	***									
290	28	0	0	***									
300	12	0	0	*									
310	7	0	0	*									
320	9	0	0	*									
330	8	0	0	*									
340	5	0	0	*									
350	11	0	0	*									
360	8	0	0	*									
370	6	0	0	*									
380	3	0	0										
390	4	0	0										
400	1	0	0										
410	10	0	0	*									
420	1	0	0										
430	0	0	0										
440	0	0	0										
450	0	0	0										
460	0	0	0										
470	0	0	0										
480	0	0	0										
490	0	0	0										
500	0	0	0										
510	0	0	0										
520	0	0	0										
530	0	0	0										
540	0	0	0										
550	0	0	0										
560	0	0	0										
570	0	0	0										
580	1	0	0										

NUMBER OF SPEEDS GREATER THAN 580 = 0

NUMBER OF OBSERVATIONS = 7100

MEAN SPEED = 104 MM/SEC

FIG. 18A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 9. 9/10/ 7/69 TO 16. 9/28/ 8/69

MEAN DIR.	FREQUENCY NO.	PCT.	0 I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
0	138	2	0	*****									
5	120	2	0	*****									
10	97	1	0	*****									
15	92	1	0	*****									
20	122	2	0	*****									
25	79	1	0	*****									
30	59	1	0	*****									
35	58	1	0	*****									
40	50	1	0	*****									
45	52	1	0	*****									
50	56	1	0	*****									
55	54	1	0	*****									
60	46	1	0	*****									
65	57	1	0	*****									
70	46	1	0	*****									
75	64	1	0	*****									
80	69	1	0	*****									
85	55	1	0	*****									
90	49	1	0	*****									
95	75	1	0	*****									
100	67	1	0	*****									
105	75	1	0	*****									
110	102	1	0	*****									
115	111	2	0	*****									
120	112	2	0	*****									
125	132	2	0	*****									
130	151	2	0	*****									
135	144	2	0	*****									
140	192	3	0	*****									
145	197	3	0	*****									
150	169	2	0	*****									
155	149	2	0	*****									
160	143	2	0	*****									
165	149	2	0	*****									
170	101	1	0	*****									
175	90	1	0	*****									
180	74	1	0	*****									
185	84	1	0	*****									
190	55	1	0	*****									
195	56	1	0	*****									
200	51	1	0	*****									
205	56	1	0	*****									
210	49	1	0	*****									
215	48	1	0	*****									
220	48	1	0	*****									
225	48	1	0	*****									
230	49	1	0	*****									
235	54	1	0	*****									
240	39	1	0	*****									
245	42	1	0	*****									
250	44	1	0	*****									
255	48	1	0	*****									
260	56	1	0	*****									
265	44	1	0	*****									
270	54	1	0	*****									
275	57	1	0	*****									
280	66	1	0	*****									
285	63	1	0	*****									
290	52	1	0	*****									
295	62	1	0	*****									
300	73	1	0	*****									
305	92	1	0	*****									
310	109	2	0	*****									
315	127	2	0	*****									
320	144	2	0	*****									
325	146	2	0	*****									
330	229	3	0	*****									
335	276	4	0	*****									
340	304	4	0	*****									
345	378	5	0	*****									
350	244	3	0	*****									
355	157	2	0	*****									

NUMBER OF OBSERVATIONS = 7100

FIG. 18B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 9. 9/10/ 7/69 TO 16. 9/28/ 8/69

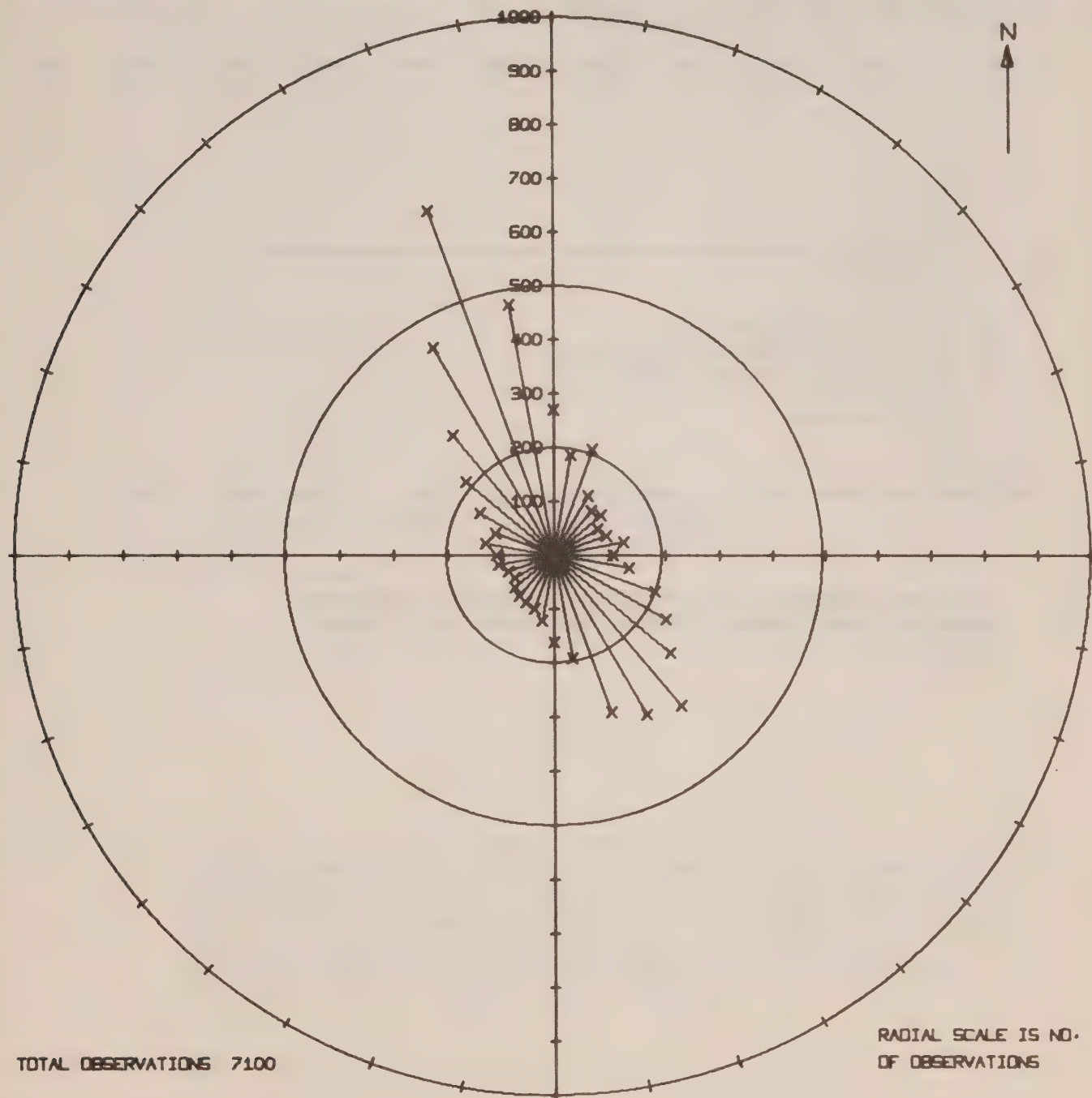


FIG. 18c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°,
BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING
JULY 10 THROUGH AUGUST 28, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 9. 9/10/ 7/69 TO 16. 9/28/ 8/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	0	200	400	600	800	1000	1200	1400	1600	1800	2000
8.00	0	0	0	I	I	I	I	I	I	I	I	I	I
8.05	0	0	0										
8.10	0	0	0										
8.15	0	0	0										
8.20	0	0	0										
8.25	7	0	0										
8.30	46	1	0**										
8.35	149	2	0*****										
8.40	43	1	0**										
8.45	307	4	0*****										
8.50	1511	21	0*****										
8.55	342	5	0*****										
8.60	266	4	0*****										
8.65	198	3	0*****										
8.70	414	6	0*****										
8.75	480	7	0*****										
8.80	711	10	0*****										
8.85	898	13	0*****										
8.90	714	10	0*****										
8.95	264	4	0*****										
9.00	177	2	0*****										
9.05	381	5	0*****										
9.10	133	2	0*****										
9.15	39	1	0**										
9.20	20	0	0*										

NUMBER OF TEMP. GREATER THAN 9.20 = 0

NUMBER OF OBSERVATIONS = 7100

MEAN TEMP = 8.72 DEG. C.

FIG. 18D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969.

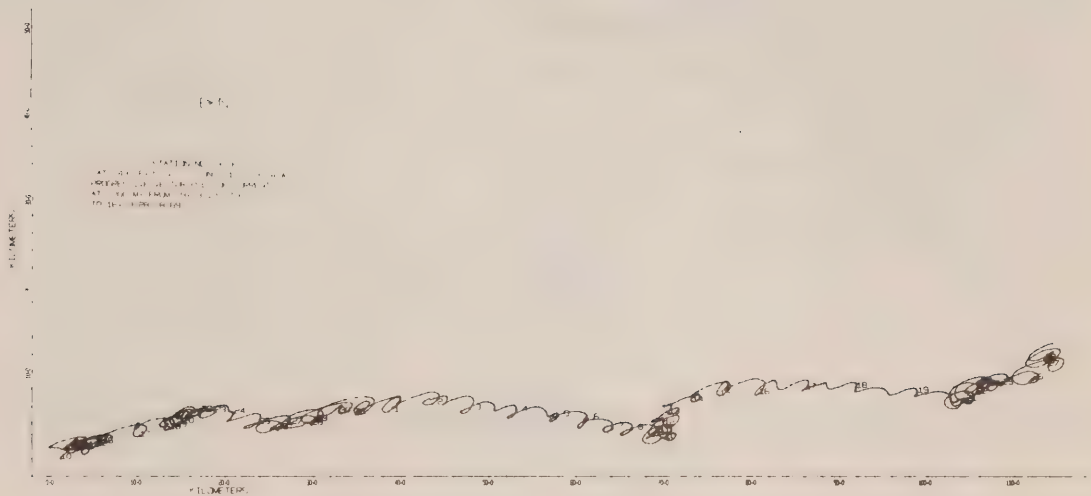


Fig. 18e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 49-day period during July 10 through August 28, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 18.29/28/ 8/69 TO 15.29/18/ 9/69

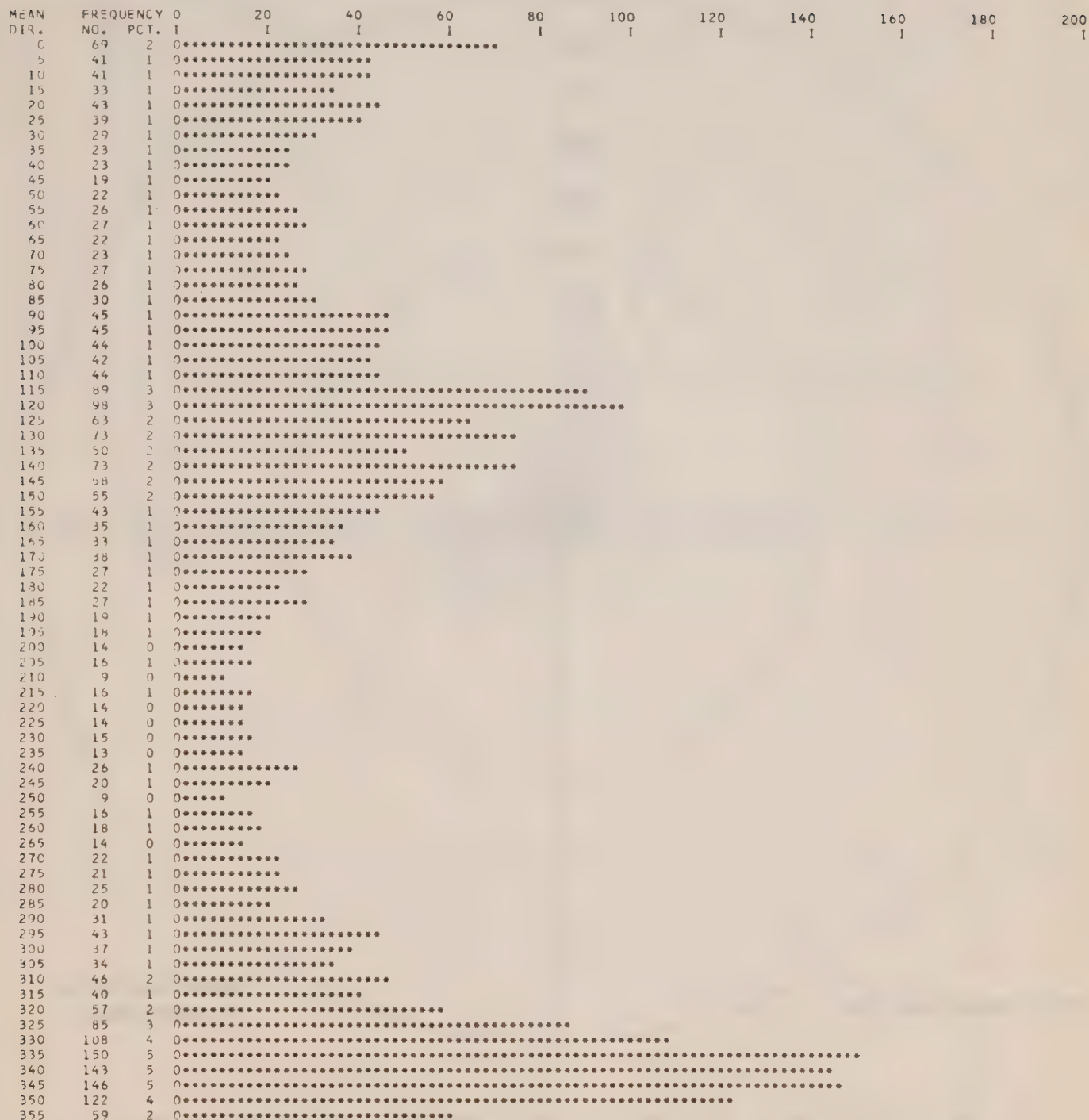
MEAN SPEED	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350	400	450	500
0	0	0	0	I	I	I	I	I	I	I	I	I	I
10	202	7	0	*****									
20	67	2	0	*****									
30	76	3	0	*****									
40	205	7	0	*****									
50	216	7	0	*****									
60	325	11	0	*****									
70	220	7	0	*****									
80	277	9	0	*****									
90	157	5	0	*****									
100	142	5	0	*****									
110	197	7	0	*****									
120	98	3	0	*****									
130	141	5	0	*****									
140	99	3	0	*****									
150	102	3	0	*****									
160	72	2	0	*****									
170	65	2	0	*****									
180	110	4	0	*****									
190	57	2	0	*****									
200	67	2	0	*****									
210	34	1	0	*****									
220	42	1	0	*****									
230	14	0	0	***									
240	11	0	0	**									
250	7	0	0	*									
260	0	0	0										
270	0	0	0										
280	2	0	0										
290	0	0	0										
300	1	0	0										

NUMBER OF SPEEDS GREATER THAN 300 = 0 NUMBER OF OBSERVATIONS = 3007 MEAN SPEED = 94 MM/SEC

FIG. 19A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 18.29/28/ 8/69 TO 15.29/18/ 9/69



NUMBER OF OBSERVATIONS = 3007

FIG. 19B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H-6 LAT. 49° 6.22' N LONG. 123° 33.74' W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 18.29/28/ 8/69 TO 15.29/18/ 9/69

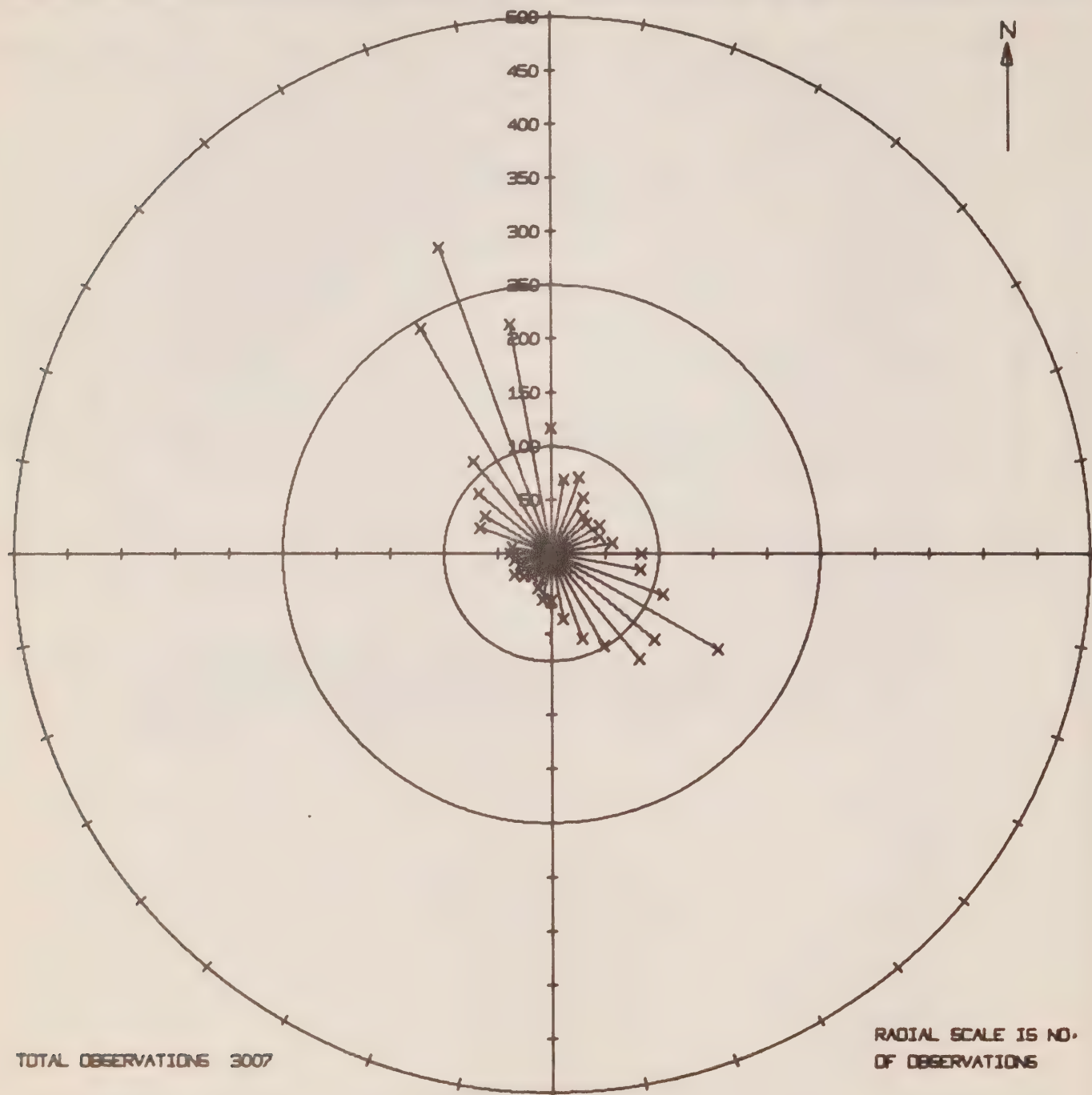


FIG. 19c. A HISTOGRAM OF DIRECTION (°) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H- 67 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 18.29/28/ 8/69 TO 15.29/18/ 9/69

MEAN TEMP.	FREQUENCY NO.	PCT.	0	200	400	600	800	1000	1200	1400	1600	1800	2000
8.00	0	0	0										
8.05	0	0	0										
8.10	0	0	0										
8.15	0	0	0										
8.20	0	0	0										
8.25	0	0	0										
8.30	0	0	0										
8.35	0	0	0										
8.40	0	0	0										
8.45	0	0	0										
8.50	0	0	0										
8.55	0	0	0										
8.60	0	0	0										
8.65	0	0	0										
8.70	0	0	0										
8.75	0	0	0										
8.80	0	0	0										
8.85	0	0	0										
8.90	0	0	0										
8.95	10	0	0*										
9.00	58	2	0***										
9.05	739	25	0*****										
9.10	1774	59	0*****										
9.15	371	12	0*****										
9.20	55	2	0***										

NUMBER OF TEMP. GREATER THAN 9.20 = 0

NUMBER OF OBSERVATIONS = 3007

MEAN TEMP = 9.09 DEG. C.

FIG. 19d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

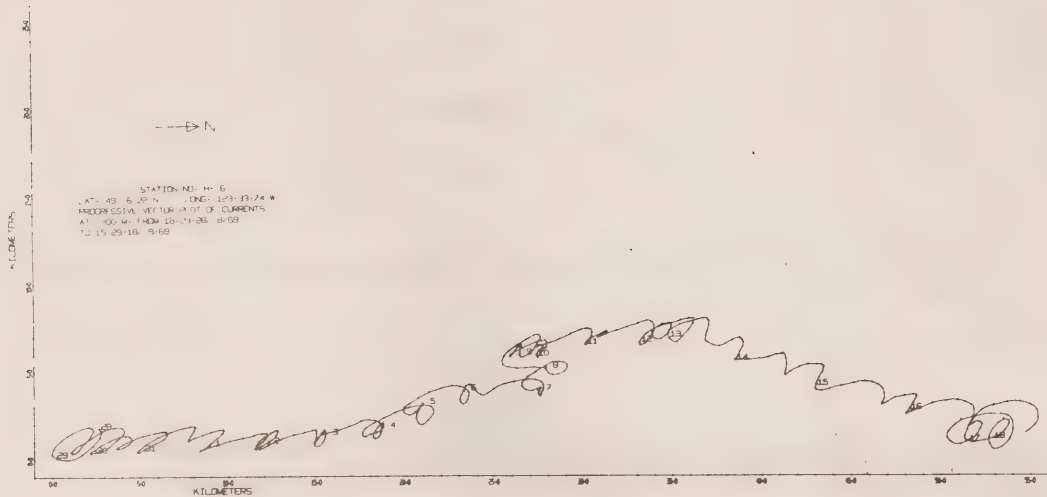
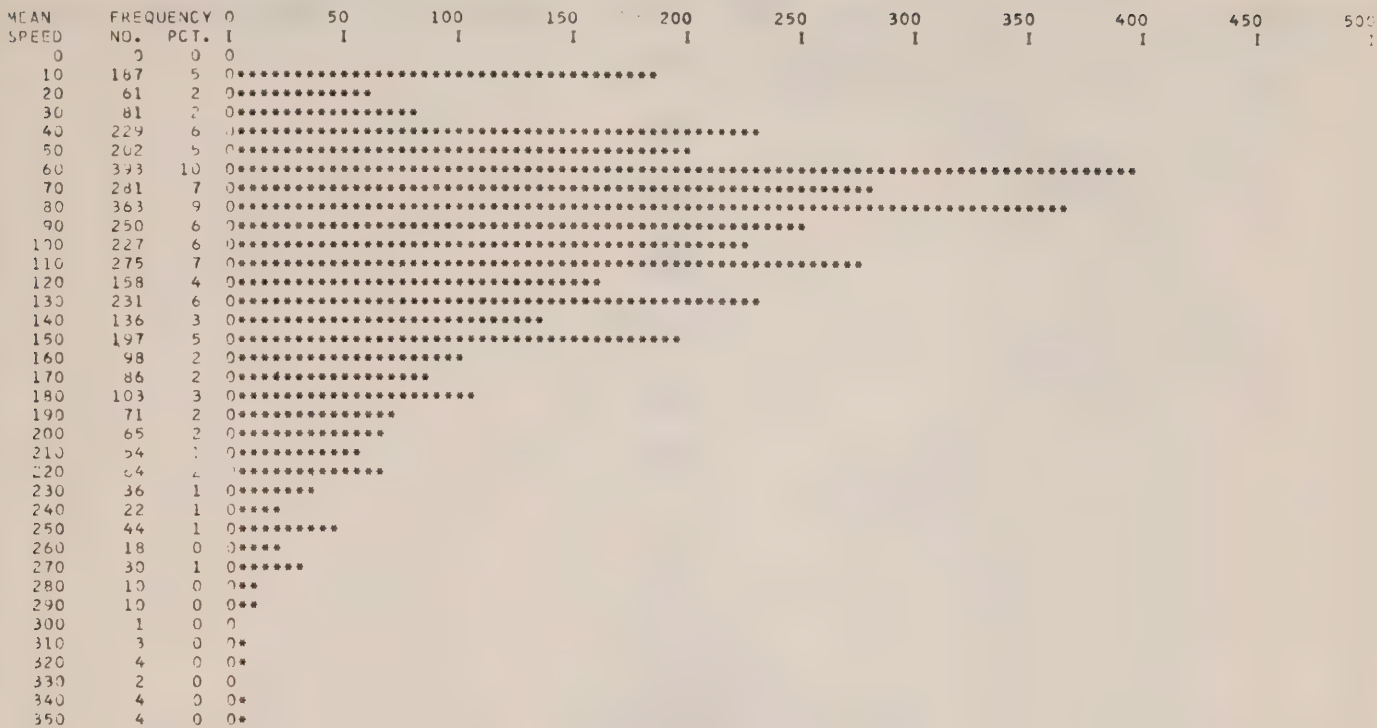


Fig. 19e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 21-day period during August 28 through September 18, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 17.59/18/ 9/69 TO 12.31/16/10/69



NUMBER OF SPEEDS GREATER THAN 350 = 0

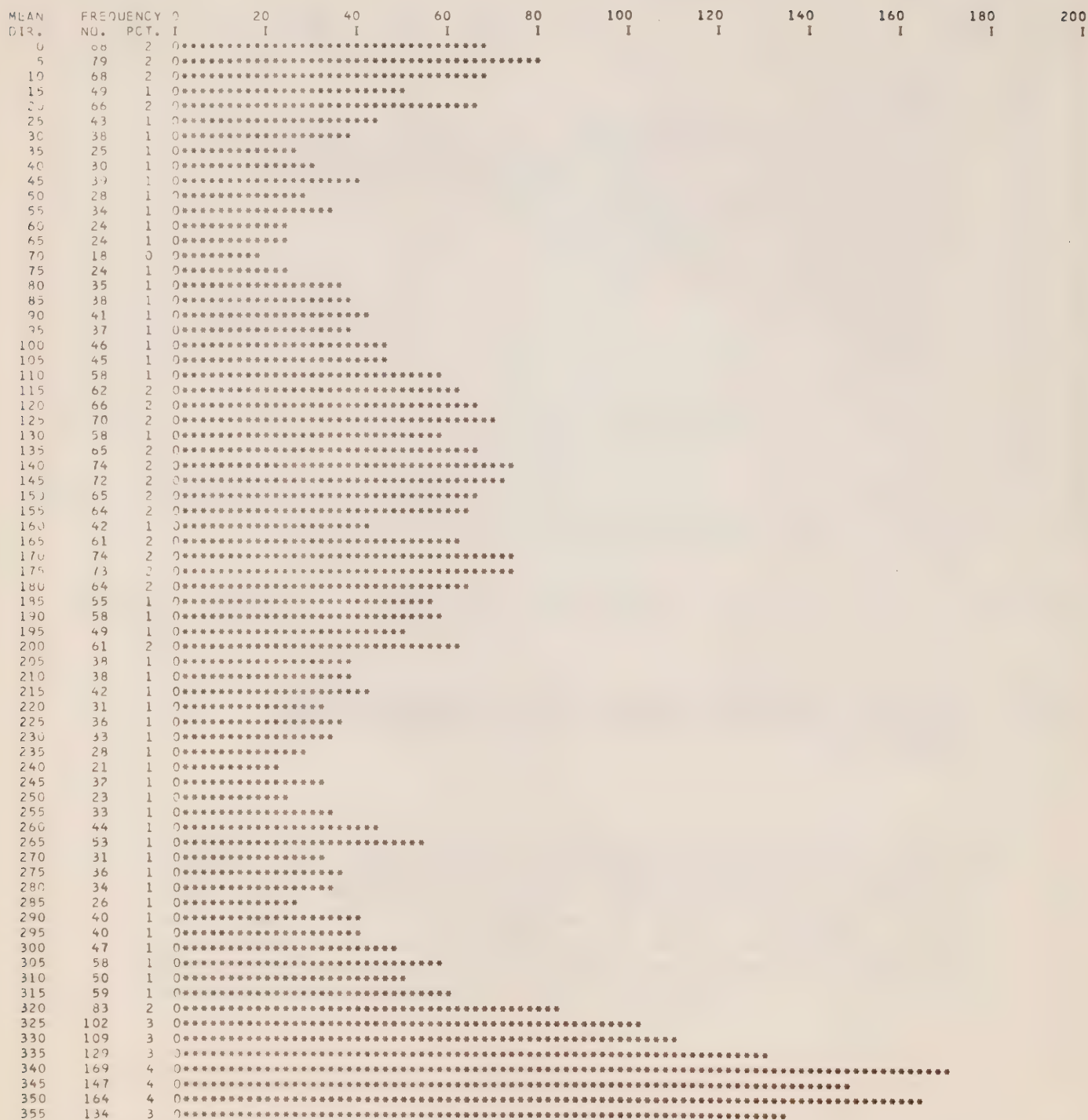
NUMBER OF OBSERVATIONS = 4000

MEAN SPEED = 104 MM/SEC

FIG. 20A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969,

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 17.59/18/ 9/69 TO 12.31/16/10/69



NUMBER OF OBSERVATIONS = 4000

FIG. 20B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 17.59/18/ 9/69 TO 12.31/16/10/69

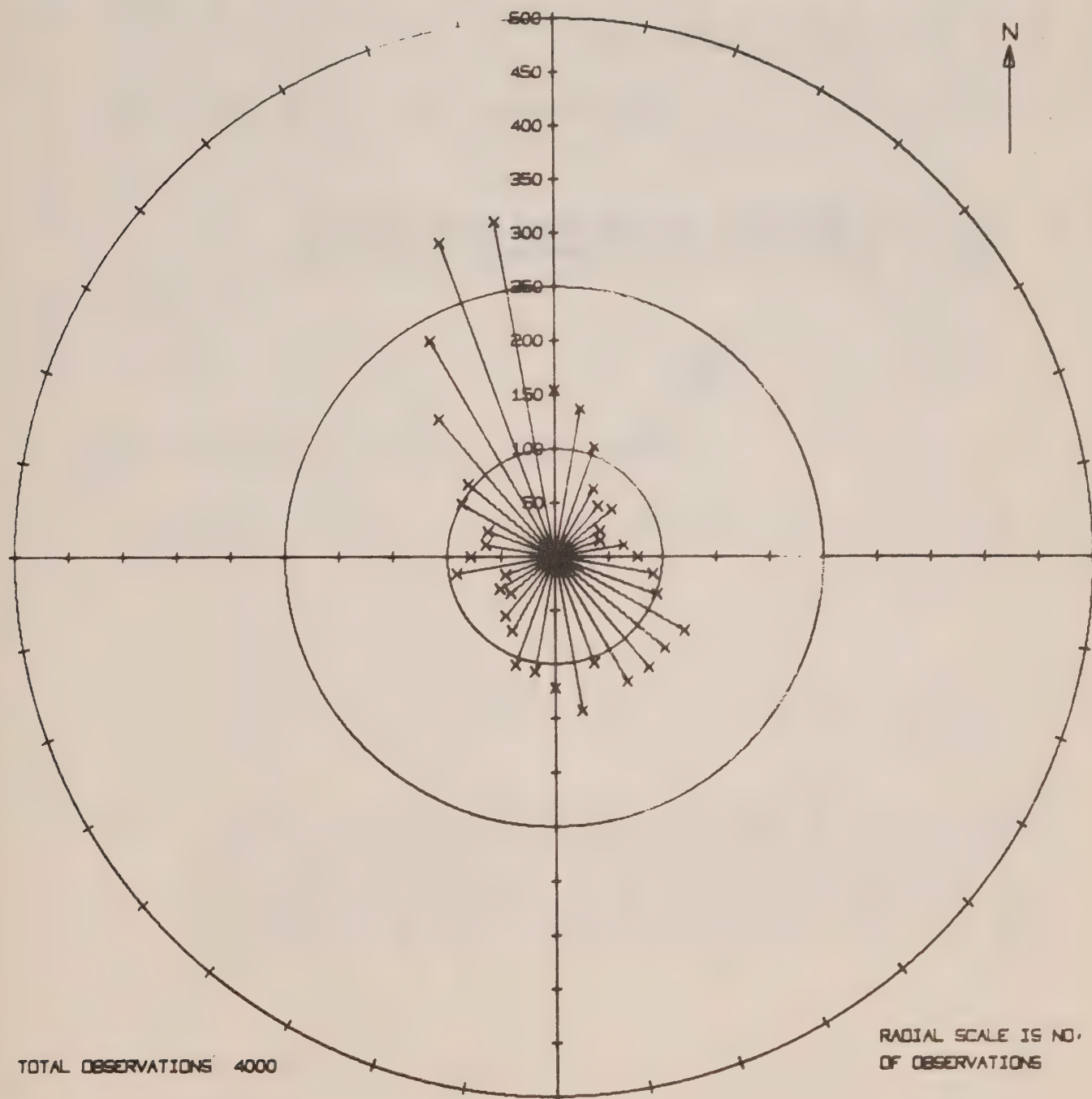


FIG. 20c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 17.59/18/ 9/69 TO 12.31/16/10/69

MEAN TEMP.	FREQUENCY NU.	0 PCT.	500 I	1000 I	1500 I	2000 I	2500 I	3000 I	3500 I	4000 I	4500 I	5000 I
9.00	6	0	0									
9.05	44	1	0*									
9.10	813	20	0*****									
9.15	2042	51	0*****									
9.20	1092	27	0*****									
9.25	3	0	0									

NUMBER OF TEMP. GREATER THAN 9.25 = 0

NUMBER OF OBSERVATIONS = 4000

MEAN TEMP = 9.15 DEG. C.

FIG. 20d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

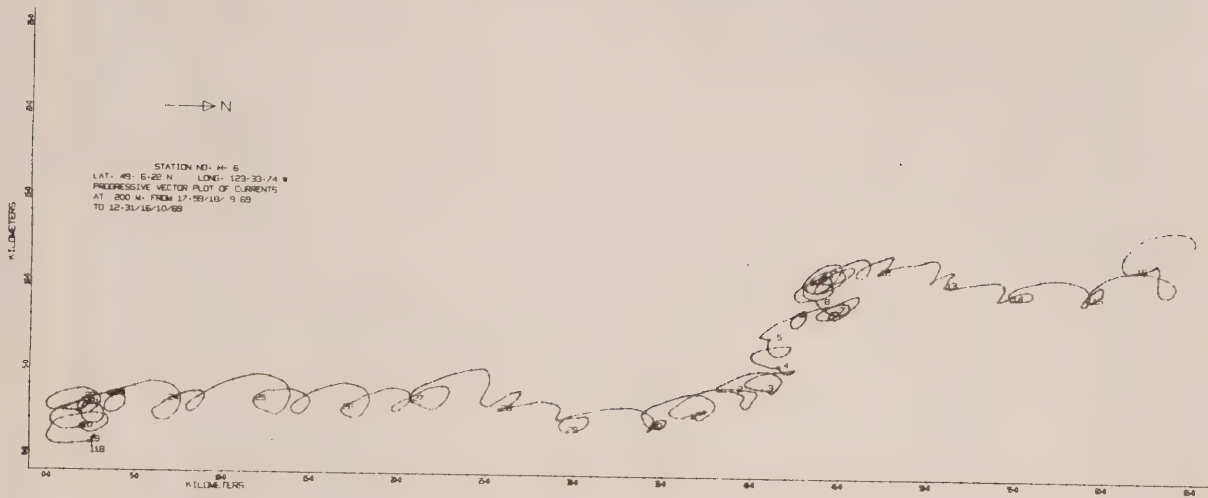


Fig. 20e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 28-day period during September 18 through October 16, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 15.51/16/10/69 TO 12.22/25/11/69

MEAN SPEED	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	0	0	0	0	0	0	0	0	0	0	0	0
10	390	7	0	0	0	0	0	0	0	0	0	0
20	140	2	0	0	0	0	0	0	0	0	0	0
30	141	2	0	0	0	0	0	0	0	0	0	0
40	318	6	0	0	0	0	0	0	0	0	0	0
50	327	6	0	0	0	0	0	0	0	0	0	0
60	587	10	0	0	0	0	0	0	0	0	0	0
70	410	7	0	0	0	0	0	0	0	0	0	0
80	494	9	0	0	0	0	0	0	0	0	0	0
90	324	6	0	0	0	0	0	0	0	0	0	0
100	286	5	0	0	0	0	0	0	0	0	0	0
110	378	7	0	0	0	0	0	0	0	0	0	0
120	191	3	0	0	0	0	0	0	0	0	0	0
130	263	5	0	0	0	0	0	0	0	0	0	0
140	145	3	0	0	0	0	0	0	0	0	0	0
150	187	3	0	0	0	0	0	0	0	0	0	0
160	137	2	0	0	0	0	0	0	0	0	0	0
170	135	2	0	0	0	0	0	0	0	0	0	0
180	169	3	0	0	0	0	0	0	0	0	0	0
190	104	2	0	0	0	0	0	0	0	0	0	0
200	125	2	0	0	0	0	0	0	0	0	0	0
210	61	1	0	0	0	0	0	0	0	0	0	0
220	69	1	0	0	0	0	0	0	0	0	0	0
230	41	1	0	0	0	0	0	0	0	0	0	0
240	35	1	0	0	0	0	0	0	0	0	0	0
250	32	1	0	0	0	0	0	0	0	0	0	0
260	34	1	0	0	0	0	0	0	0	0	0	0
270	53	1	0	0	0	0	0	0	0	0	0	0
280	29	1	0	0	0	0	0	0	0	0	0	0
290	40	1	0	0	0	0	0	0	0	0	0	0
300	20	0	0	0	0	0	0	0	0	0	0	0
310	13	0	0	0	0	0	0	0	0	0	0	0
320	22	0	0	0	0	0	0	0	0	0	0	0
330	13	0	0	0	0	0	0	0	0	0	0	0
340	15	0	0	0	0	0	0	0	0	0	0	0
350	4	0	0	0	0	0	0	0	0	0	0	0
360	8	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 360 = 0

NUMBER OF OBSERVATIONS = 5740

MEAN SPEED = 103 MM/SEC

FIG. 21A. A HISTOGRAM OF SPEED (CM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 67 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 15.51/16/10/69 TO 12.22/25/11/69

MEAN DIR.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
0	103	2	0	0	0	0	0	0	0	0	0	0	0
5	88	2	0	0	0	0	0	0	0	0	0	0	0
10	71	1	0	0	0	0	0	0	0	0	0	0	0
15	66	1	0	0	0	0	0	0	0	0	0	0	0
20	97	2	0	0	0	0	0	0	0	0	0	0	0
25	45	1	0	0	0	0	0	0	0	0	0	0	0
30	49	1	0	0	0	0	0	0	0	0	0	0	0
35	30	1	0	0	0	0	0	0	0	0	0	0	0
40	27	0	0	0	0	0	0	0	0	0	0	0	0
45	32	1	0	0	0	0	0	0	0	0	0	0	0
50	39	1	0	0	0	0	0	0	0	0	0	0	0
55	31	1	0	0	0	0	0	0	0	0	0	0	0
60	35	1	0	0	0	0	0	0	0	0	0	0	0
65	47	1	0	0	0	0	0	0	0	0	0	0	0
70	39	1	0	0	0	0	0	0	0	0	0	0	0
75	40	1	0	0	0	0	0	0	0	0	0	0	0
80	42	1	0	0	0	0	0	0	0	0	0	0	0
85	61	1	0	0	0	0	0	0	0	0	0	0	0
90	49	1	0	0	0	0	0	0	0	0	0	0	0
95	43	1	0	0	0	0	0	0	0	0	0	0	0
100	52	1	0	0	0	0	0	0	0	0	0	0	0
105	60	1	0	0	0	0	0	0	0	0	0	0	0
110	49	1	0	0	0	0	0	0	0	0	0	0	0
115	82	1	0	0	0	0	0	0	0	0	0	0	0
120	99	2	0	0	0	0	0	0	0	0	0	0	0
125	108	2	0	0	0	0	0	0	0	0	0	0	0
130	89	2	0	0	0	0	0	0	0	0	0	0	0
135	124	2	0	0	0	0	0	0	0	0	0	0	0
140	136	2	0	0	0	0	0	0	0	0	0	0	0
145	132	2	0	0	0	0	0	0	0	0	0	0	0
150	101	2	0	0	0	0	0	0	0	0	0	0	0
155	112	2	0	0	0	0	0	0	0	0	0	0	0
160	83	1	0	0	0	0	0	0	0	0	0	0	0
165	81	1	0	0	0	0	0	0	0	0	0	0	0
170	87	2	0	0	0	0	0	0	0	0	0	0	0
175	83	1	0	0	0	0	0	0	0	0	0	0	0
180	74	1	0	0	0	0	0	0	0	0	0	0	0
185	62	1	0	0	0	0	0	0	0	0	0	0	0
190	69	1	0	0	0	0	0	0	0	0	0	0	0
195	49	1	0	0	0	0	0	0	0	0	0	0	0
200	55	1	0	0	0	0	0	0	0	0	0	0	0
205	60	1	0	0	0	0	0	0	0	0	0	0	0
210	46	1	0	0	0	0	0	0	0	0	0	0	0
215	65	1	0	0	0	0	0	0	0	0	0	0	0
220	56	1	0	0	0	0	0	0	0	0	0	0	0
225	51	1	0	0	0	0	0	0	0	0	0	0	0
230	49	1	0	0	0	0	0	0	0	0	0	0	0
235	43	1	0	0	0	0	0	0	0	0	0	0	0
240	51	1	0	0	0	0	0	0	0	0	0	0	0
245	59	1	0	0	0	0	0	0	0	0	0	0	0
250	52	1	0	0	0	0	0	0	0	0	0	0	0
255	49	1	0	0	0	0	0	0	0	0	0	0	0
260	57	1	0	0	0	0	0	0	0	0	0	0	0
265	78	1	0	0	0	0	0	0	0	0	0	0	0
270	52	1	0	0	0	0	0	0	0	0	0	0	0
275	48	1	0	0	0	0	0	0	0	0	0	0	0
280	48	1	0	0	0	0	0	0	0	0	0	0	0
285	53	1	0	0	0	0	0	0	0	0	0	0	0
290	48	1	0	0	0	0	0	0	0	0	0	0	0
295	57	1	0	0	0	0	0	0	0	0	0	0	0
300	58	1	0	0	0	0	0	0	0	0	0	0	0
305	83	1	0	0	0	0	0	0	0	0	0	0	0
310	68	1	0	0	0	0	0	0	0	0	0	0	0
315	103	2	0	0	0	0	0	0	0	0	0	0	0
320	155	3	0	0	0	0	0	0	0	0	0	0	0
325	184	3	0	0	0	0	0	0	0	0	0	0	0
330	221	4	0	0	0	0	0	0	0	0	0	0	0
335	201	4	0	0	0	0	0	0	0	0	0	0	0
340	237	4	0	0	0	0	0	0	0	0	0	0	0
345	216	4	0	0	0	0	0	0	0	0	0	0	0
350	207	4	0	0	0	0	0	0	0	0	0	0	0
355	164	3	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 5740

FIG. 21b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

STATION NO. H-6 LAT. 49-6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 15.51/16/10/69 TO 12.22/25/11/69

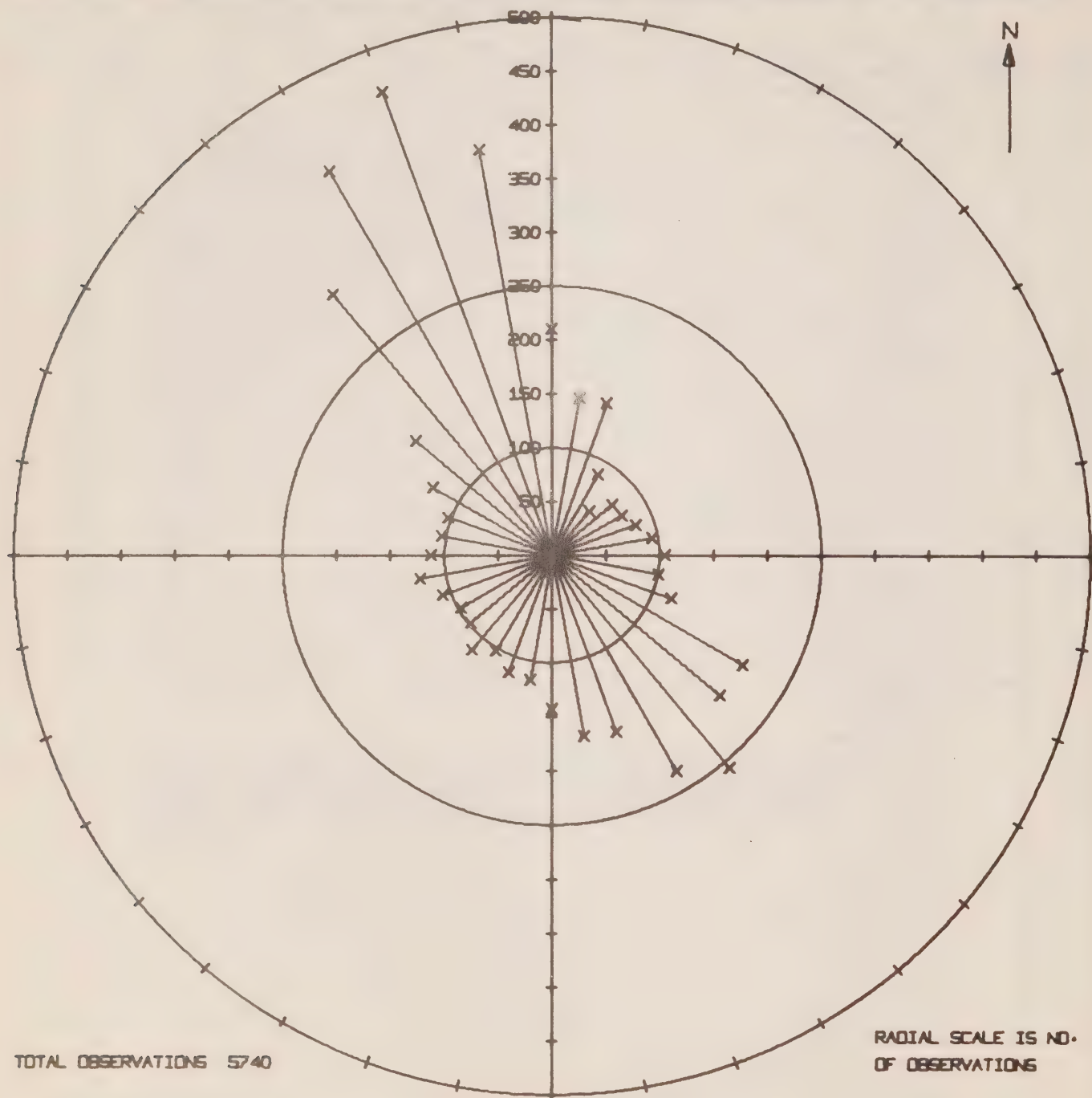


FIG. 21c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

STATION NO. H- 6 LAT. 49- 5.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 15.51/16/10/69 TO 12.22/25/11/69

MEAN TEMP.	FREQUENCY NO.	PCT.	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
8.00	0	0	1	1	1	1	1	1	1	1	1	1
8.05	0	0										
8.10	0	0										
8.15	0	0										
8.20	0	0										
8.25	0	0										
8.30	0	0										
8.35	0	0										
8.40	0	0										
8.45	0	0										
8.50	0	0										
8.55	0	0										
8.60	0	0										
8.65	0	0										
8.70	0	0										
8.75	0	0										
8.80	0	0										
8.85	0	0										
8.90	1	0										
8.95	0	0										
9.00	0	0										
9.05	0	0										
9.10	518	9	0	0	0	0	0	0	0	0	0	0
9.15	3684	64	0	0	0	0	0	0	0	0	0	0
9.20	1534	27	0	0	0	0	0	0	0	0	0	0
9.25	3	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 9.25 = 0

NUMBER OF OBSERVATIONS = 5740

MEAN TEMP = 9.16 DEG. C.

FIG. 21d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

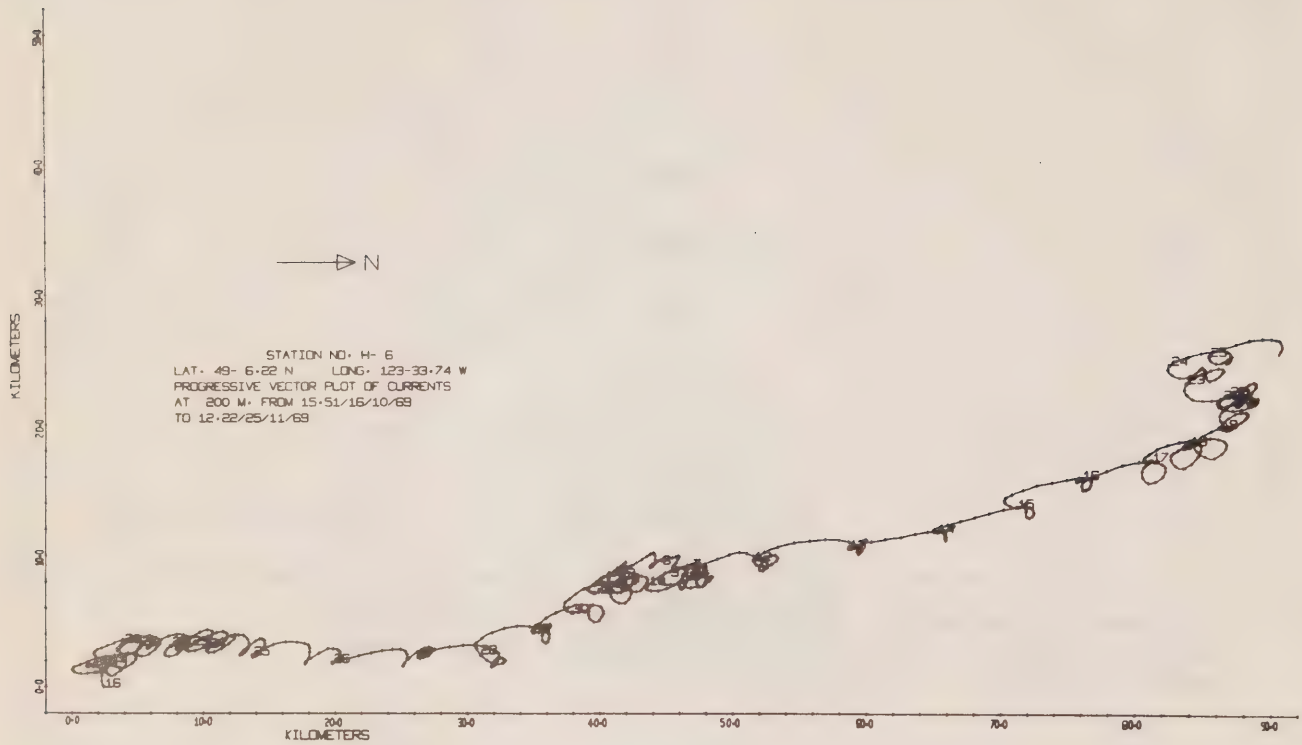


Fig. 21e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 40-day period during October 16 through November 25, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 16.42/25/11/69 TO 9.33/14/ 1/70

MEAN SPEED	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
0	0	0	0										
10	495	7	0	*****									
20	151	2	0	*****									
30	180	3	0	*****									
40	405	6	0	*****									
50	356	5	0	*****									
60	653	9	0	*****									
70	429	6	0	*****									
80	581	8	0	*****									
90	389	5	0	*****									
100	317	4	0	*****									
110	452	6	0	*****									
120	288	4	0	*****									
130	389	5	0	*****									
140	242	3	0	*****									
150	265	4	0	*****									
160	185	3	0	*****									
170	147	2	0	*****									
180	219	3	0	*****									
190	123	2	0	*****									
200	154	2	0	*****									
210	89	1	0	*****									
220	146	2	0	*****									
230	83	1	0	*****									
240	73	1	0	*****									
250	100	1	0	*****									
260	64	1	0	*****									
270	55	1	0	*****									
280	29	0	0	****									
290	44	1	0	****									
300	21	0	0	***									
310	17	0	0	**									
320	8	0	0	*									
330	3	0	0										
340	3	0	0										
350	2	0	0										
360	1	0	0										

NUMBER OF SPEEDS GREATER THAN 360 = 0

NUMBER OF OBSERVATIONS = 7158

MEAN SPEED = 107 MM/SEC

FIG. 22A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 50-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 14, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 16.42/75/11/69 TO 9.33/14/ 1/70

MEAN DIR.	FREQUENCY NO.	PERCENT PCT.	0	50	100	150	200	250	300	350	400	450	500
0	164	2	0	0	0	0	0	0	0	0	0	0	0
5	128	2	0	0	0	0	0	0	0	0	0	0	0
10	103	1	0	0	0	0	0	0	0	0	0	0	0
15	101	1	0	0	0	0	0	0	0	0	0	0	0
20	118	2	0	0	0	0	0	0	0	0	0	0	0
25	80	1	0	0	0	0	0	0	0	0	0	0	0
30	68	1	0	0	0	0	0	0	0	0	0	0	0
35	62	1	0	0	0	0	0	0	0	0	0	0	0
40	56	1	0	0	0	0	0	0	0	0	0	0	0
45	43	1	0	0	0	0	0	0	0	0	0	0	0
50	44	1	0	0	0	0	0	0	0	0	0	0	0
55	38	1	0	0	0	0	0	0	0	0	0	0	0
60	42	1	0	0	0	0	0	0	0	0	0	0	0
65	61	1	0	0	0	0	0	0	0	0	0	0	0
70	59	1	0	0	0	0	0	0	0	0	0	0	0
75	51	1	0	0	0	0	0	0	0	0	0	0	0
80	34	0	0	0	0	0	0	0	0	0	0	0	0
85	55	1	0	0	0	0	0	0	0	0	0	0	0
90	45	1	0	0	0	0	0	0	0	0	0	0	0
95	41	1	0	0	0	0	0	0	0	0	0	0	0
100	54	1	0	0	0	0	0	0	0	0	0	0	0
105	56	1	0	0	0	0	0	0	0	0	0	0	0
110	65	1	0	0	0	0	0	0	0	0	0	0	0
115	78	1	0	0	0	0	0	0	0	0	0	0	0
120	81	1	0	0	0	0	0	0	0	0	0	0	0
125	80	1	0	0	0	0	0	0	0	0	0	0	0
130	82	1	0	0	0	0	0	0	0	0	0	0	0
135	88	1	0	0	0	0	0	0	0	0	0	0	0
140	119	2	0	0	0	0	0	0	0	0	0	0	0
145	148	2	0	0	0	0	0	0	0	0	0	0	0
150	136	2	0	0	0	0	0	0	0	0	0	0	0
155	157	2	0	0	0	0	0	0	0	0	0	0	0
160	163	2	0	0	0	0	0	0	0	0	0	0	0
165	117	2	0	0	0	0	0	0	0	0	0	0	0
170	150	2	0	0	0	0	0	0	0	0	0	0	0
175	162	2	0	0	0	0	0	0	0	0	0	0	0
180	163	2	0	0	0	0	0	0	0	0	0	0	0
185	156	2	0	0	0	0	0	0	0	0	0	0	0
190	133	2	0	0	0	0	0	0	0	0	0	0	0
195	119	2	0	0	0	0	0	0	0	0	0	0	0
200	107	1	0	0	0	0	0	0	0	0	0	0	0
205	97	1	0	0	0	0	0	0	0	0	0	0	0
210	100	1	0	0	0	0	0	0	0	0	0	0	0
215	78	1	0	0	0	0	0	0	0	0	0	0	0
220	70	1	0	0	0	0	0	0	0	0	0	0	0
225	101	1	0	0	0	0	0	0	0	0	0	0	0
230	69	1	0	0	0	0	0	0	0	0	0	0	0
235	64	1	0	0	0	0	0	0	0	0	0	0	0
240	68	1	0	0	0	0	0	0	0	0	0	0	0
245	51	1	0	0	0	0	0	0	0	0	0	0	0
250	60	1	0	0	0	0	0	0	0	0	0	0	0
255	68	1	0	0	0	0	0	0	0	0	0	0	0
260	62	1	0	0	0	0	0	0	0	0	0	0	0
265	81	1	0	0	0	0	0	0	0	0	0	0	0
270	68	1	0	0	0	0	0	0	0	0	0	0	0
275	62	1	0	0	0	0	0	0	0	0	0	0	0
280	67	1	0	0	0	0	0	0	0	0	0	0	0
285	62	1	0	0	0	0	0	0	0	0	0	0	0
290	74	1	0	0	0	0	0	0	0	0	0	0	0
295	96	1	0	0	0	0	0	0	0	0	0	0	0
300	104	1	0	0	0	0	0	0	0	0	0	0	0
305	94	1	0	0	0	0	0	0	0	0	0	0	0
310	104	1	0	0	0	0	0	0	0	0	0	0	0
315	114	2	0	0	0	0	0	0	0	0	0	0	0
320	171	2	0	0	0	0	0	0	0	0	0	0	0
325	177	2	0	0	0	0	0	0	0	0	0	0	0
330	199	3	0	0	0	0	0	0	0	0	0	0	0
335	211	3	0	0	0	0	0	0	0	0	0	0	0
340	216	3	0	0	0	0	0	0	0	0	0	0	0
345	226	3	0	0	0	0	0	0	0	0	0	0	0
350	188	3	0	0	0	0	0	0	0	0	0	0	0
355	150	2	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 7158

FIG. 22B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 50-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 14, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 16.42/25/11/69 TO 9.33/14/ 1/70

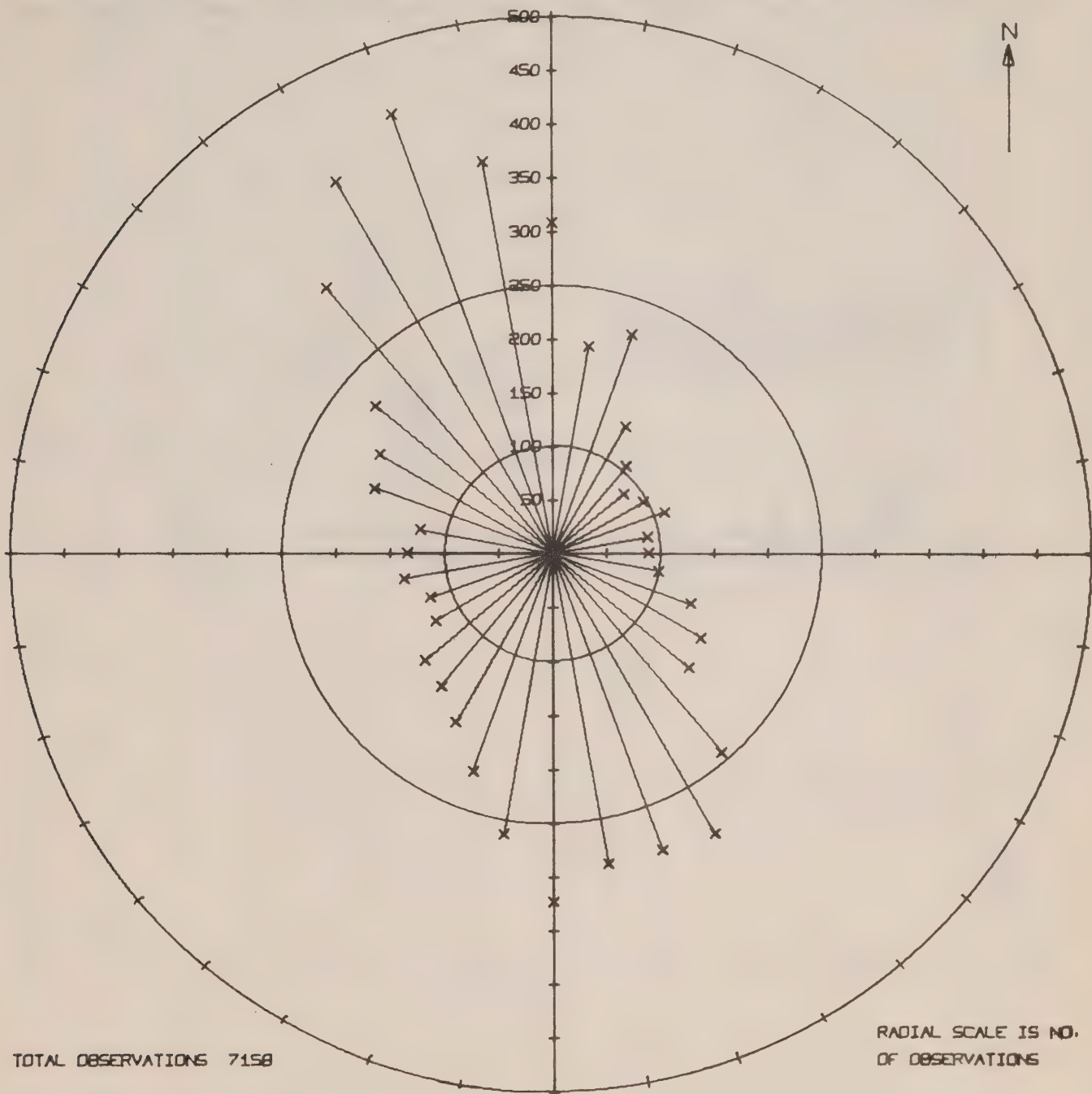


FIG. 22c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 50-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 14, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 16.42/25/11/69 TO 9.33/14/ 1/70

MEAN TEMP.	FREQUENCY NO.	PCT.	0	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
8.00	0	0	0	1	1	1	1	1	1	1	1	1	1
8.05	0	0	0										
8.10	0	0	0										
8.15	0	0	0										
8.20	0	0	0										
8.25	0	0	0										
8.30	0	0	0										
8.35	0	0	0										
8.40	0	0	0										
8.45	0	0	0										
8.50	0	0	0										
8.55	0	0	0										
8.60	0	0	0										
8.65	0	0	0										
8.70	0	0	0										
8.75	0	0	0										
8.80	0	0	0										
8.85	5	0	0										
8.90	50	1	0										
8.95	716	10	0	*****									
9.00	1626	23	0	*****									
9.05	1202	17	0	*****									
9.10	3175	44	0	*****									
9.15	379	5	0	*****									
9.20	4	0	0										
9.25	1	0	0										

NUMBER OF TEMP. GREATER THAN 9.25 = 0

NUMBER OF OBSERVATIONS = 7158

MEAN TEMP = 9.06 DEG. C.

FIG. 22D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 50-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 14, 1970.

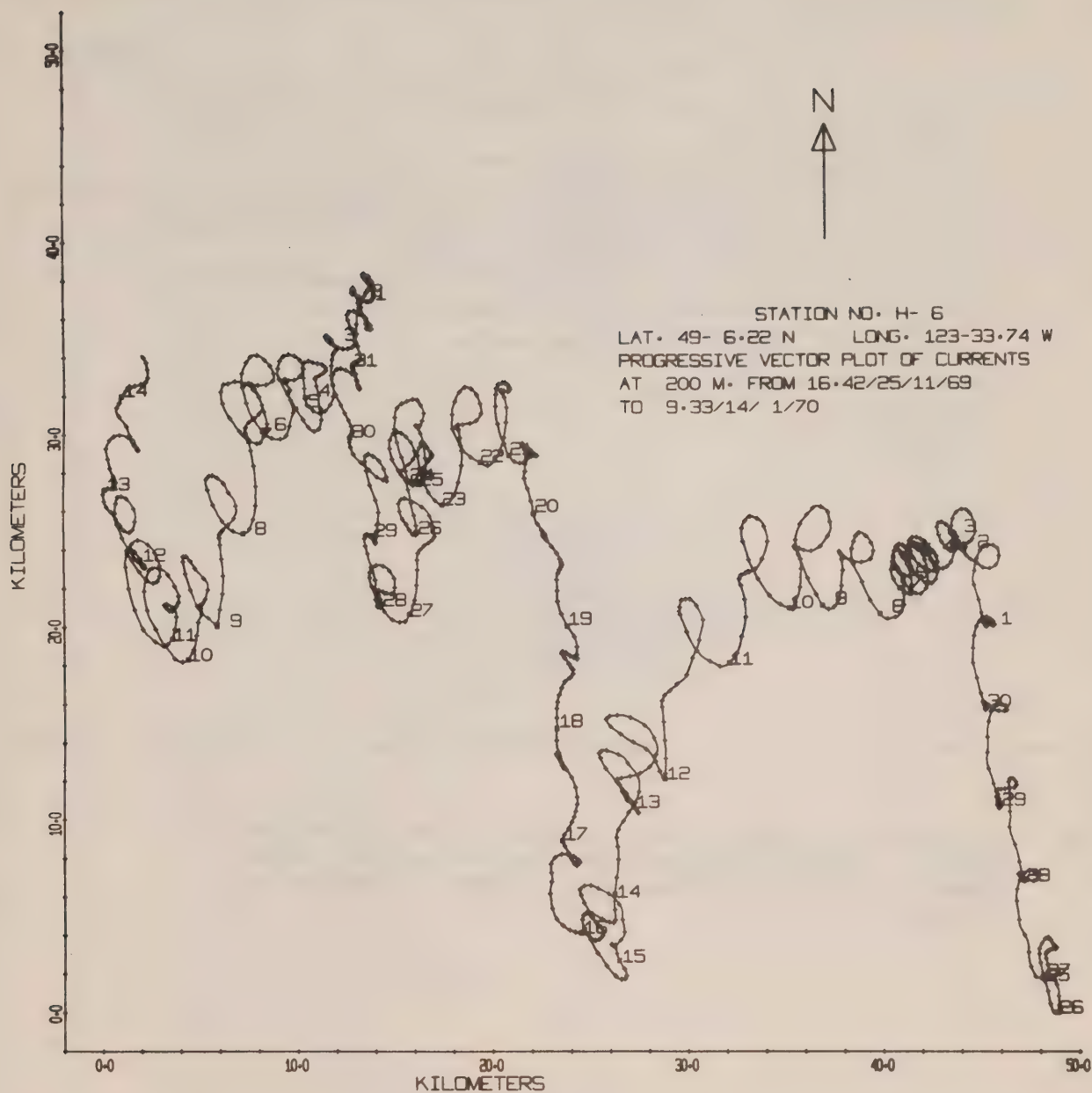


Fig. 22e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 50-day period during November 25, 1969 through January 14, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. 0-6 LAT. 49- 6.22 N LONG. 123-33.74

PERCENTAGE OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METERS
DURING PERIOD, FROM 12.5 /14/ 1970 TO 9.28/27/ 1970

STATION	FREQUENCY	0	50	100	150	200	250	300	350	400	450	500
0	0	0	0	0	0	0	0	0	0	0	0	0
10	269	5	0	0	0	0	0	0	0	0	0	0
20	89	2	0	0	0	0	0	0	0	0	0	0
30	137	3	0	0	0	0	0	0	0	0	0	0
40	258	5	0	0	0	0	0	0	0	0	0	0
50	227	4	0	0	0	0	0	0	0	0	0	0
60	423	9	0	0	0	0	0	0	0	0	0	0
70	374	7	0	0	0	0	0	0	0	0	0	0
80	434	7	0	0	0	0	0	0	0	0	0	0
90	303	5	0	0	0	0	0	0	0	0	0	0
100	289	6	0	0	0	0	0	0	0	0	0	0
110	417	8	0	0	0	0	0	0	0	0	0	0
120	236	5	0	0	0	0	0	0	0	0	0	0
130	306	6	0	0	0	0	0	0	0	0	0	0
140	202	4	0	0	0	0	0	0	0	0	0	0
150	258	5	0	0	0	0	0	0	0	0	0	0
160	160	3	0	0	0	0	0	0	0	0	0	0
170	110	2	0	0	0	0	0	0	0	0	0	0
180	175	3	0	0	0	0	0	0	0	0	0	0
190	87	2	0	0	0	0	0	0	0	0	0	0
200	86	2	0	0	0	0	0	0	0	0	0	0
210	39	1	0	0	0	0	0	0	0	0	0	0
220	54	1	0	0	0	0	0	0	0	0	0	0
230	23	0	0	0	0	0	0	0	0	0	0	0
240	21	0	0	0	0	0	0	0	0	0	0	0
250	33	1	0	0	0	0	0	0	0	0	0	0
260	18	0	0	0	0	0	0	0	0	0	0	0
270	12	0	0	0	0	0	0	0	0	0	0	0
280	7	0	0	0	0	0	0	0	0	0	0	0
290	7	0	0	0	0	0	0	0	0	0	0	0
300	1	0	0	0	0	0	0	0	0	0	0	0
310	0	0	0	0	0	0	0	0	0	0	0	0
320	3	0	0	0	0	0	0	0	0	0	0	0
330	0	0	0	0	0	0	0	0	0	0	0	0
340	1	0	0	0	0	0	0	0	0	0	0	0
350	0	0	0	0	0	0	0	0	0	0	0	0
360	1	0	0	0	0	0	0	0	0	0	0	0
370	1	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 370 = 0

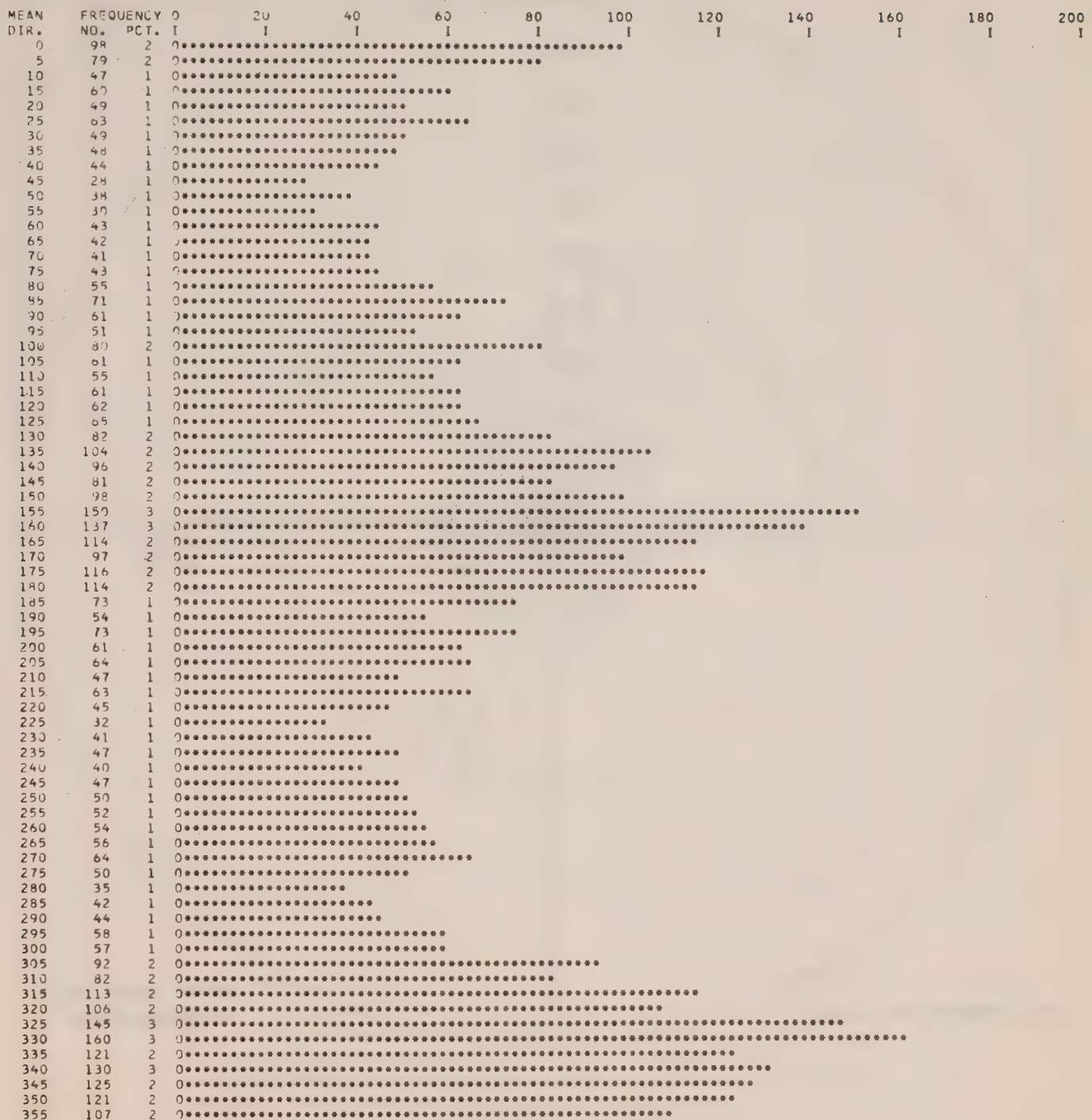
NUMBER OF OBSERVATIONS = 5164

MEAN SPEED = 101 MM/SEC

FIG. 23A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 36-DAY PERIOD DURING JANUARY 14 THROUGH FEBRUARY 19, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 12.55/14/ 1/70 TO 9.28/19/ 2/70



NUMBER OF OBSERVATIONS = 5164

FIG. 23B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5° FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 36-DAY PERIOD DURING JANUARY 14 THROUGH FEBRUARY 19, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 12.55/14/ 1/70 TO 9.28/19/ 2/70

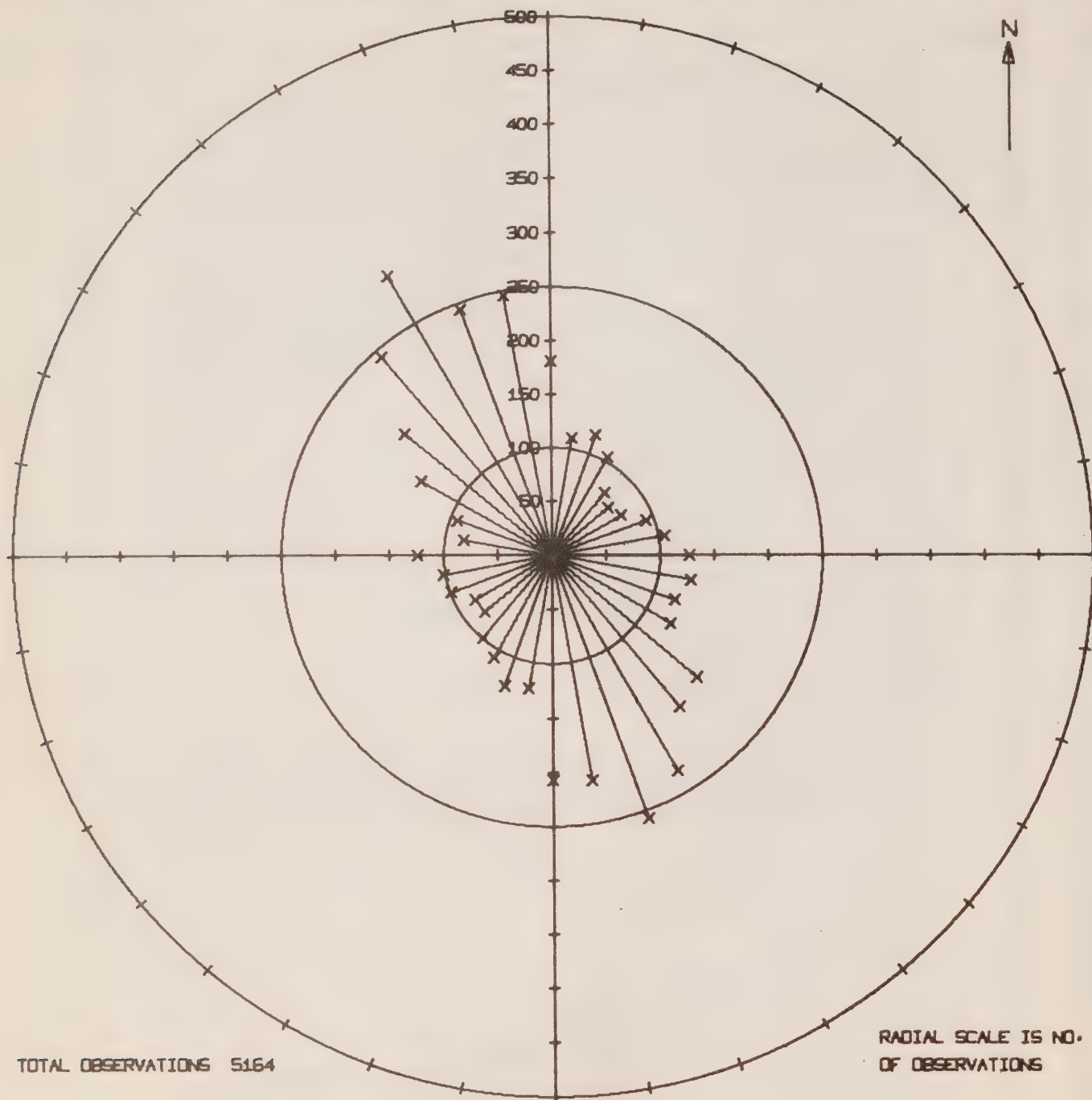
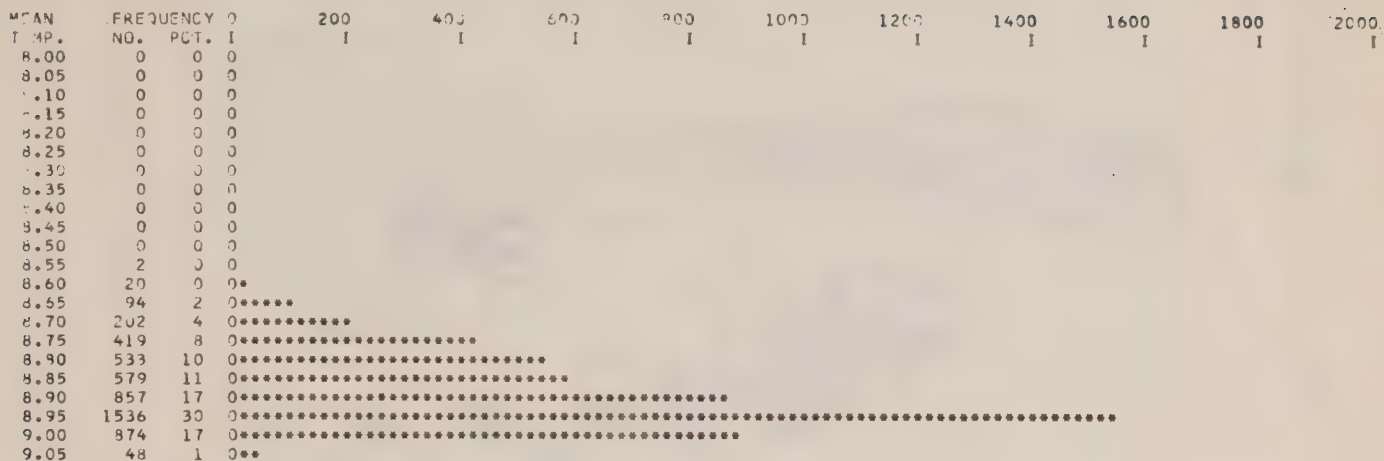


FIG. 23c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 36-DAY PERIOD DURING JANUARY 14 THROUGH FEBRUARY 19, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 12.55/14/ 1/70 TO 9.28/19/ 2/70



NUMBER OF TEMP. GREATER THAN 9.05 = 0 NUMBER OF OBSERVATIONS = 5164 MEAN TEMP = 8.89 DEG. C.

FIG. 23b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 36-DAY PERIOD DURING JANUARY 14 THROUGH FEBRUARY 19, 1970.

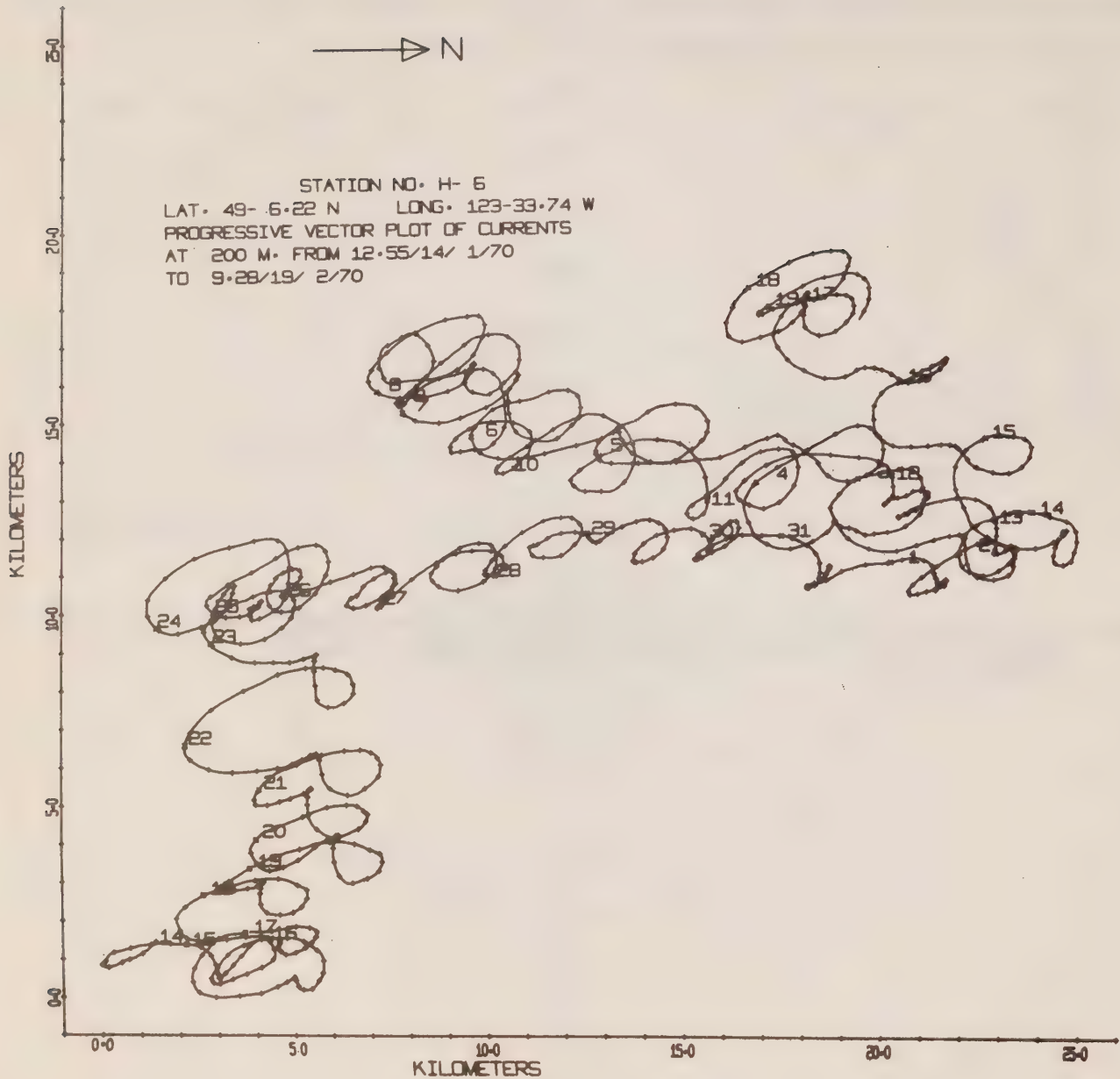
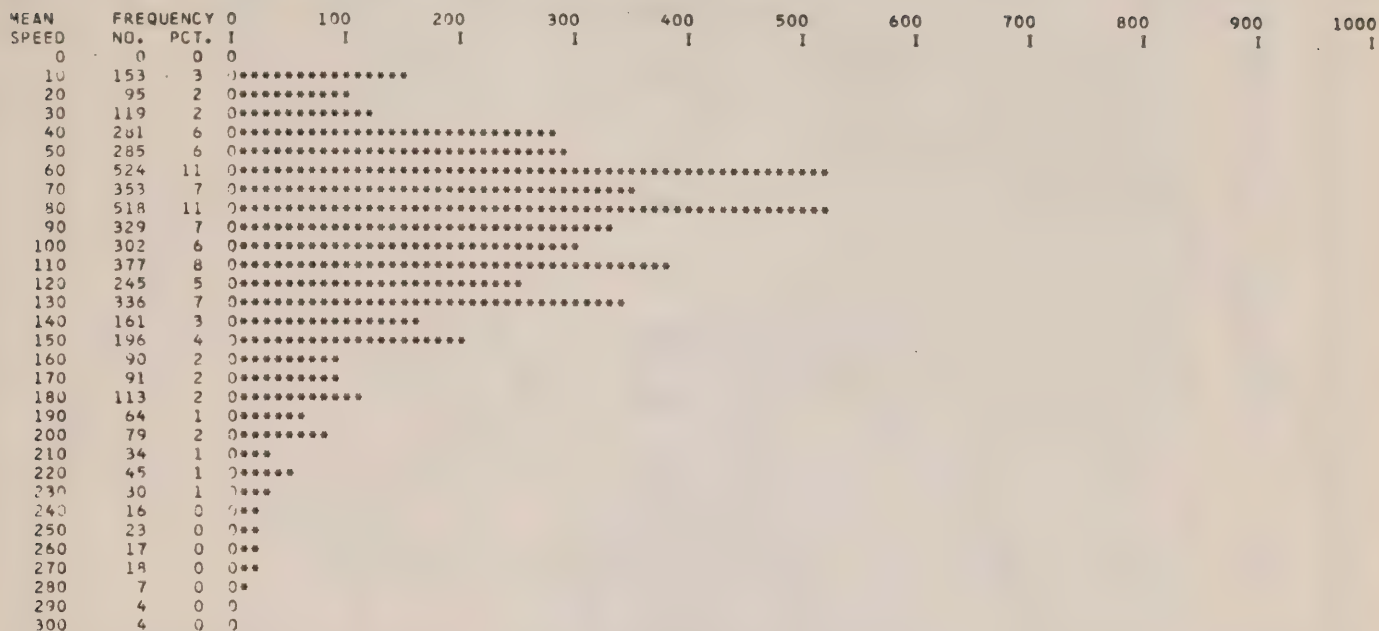


Fig. 23e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 36-day period during January 14 through February 19, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6/ LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 11.51/19/ 2/70 TO 13.58/25/ 3/70



NUMBER OF SPEEDS GREATER THAN 300 = 0

NUMBER OF OBSERVATIONS = 4909

MEAN SPEED = 98 MM/SEC

FIG. 24A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 5 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 11.51/19/ 2/70 TO 13.58/25/ 3/70

MEAN DIR.	FREQUENCY NO.	PCT. I	20 I	40 I	60 I	80 I	100 I	120 I	140 I	160 I	180 I	200 I
0	95	2	0	0	0	0	0	0	0	0	0	0
5	79	2	0	0	0	0	0	0	0	0	0	0
10	65	1	0	0	0	0	0	0	0	0	0	0
15	68	1	0	0	0	0	0	0	0	0	0	0
20	85	2	0	0	0	0	0	0	0	0	0	0
25	53	1	0	0	0	0	0	0	0	0	0	0
30	61	1	0	0	0	0	0	0	0	0	0	0
35	54	1	0	0	0	0	0	0	0	0	0	0
40	52	1	0	0	0	0	0	0	0	0	0	0
45	41	1	0	0	0	0	0	0	0	0	0	0
50	60	1	0	0	0	0	0	0	0	0	0	0
55	43	1	0	0	0	0	0	0	0	0	0	0
60	57	1	0	0	0	0	0	0	0	0	0	0
65	61	1	0	0	0	0	0	0	0	0	0	0
70	68	1	0	0	0	0	0	0	0	0	0	0
75	78	2	0	0	0	0	0	0	0	0	0	0
80	79	2	0	0	0	0	0	0	0	0	0	0
85	90	2	0	0	0	0	0	0	0	0	0	0
90	90	2	0	0	0	0	0	0	0	0	0	0
95	73	1	0	0	0	0	0	0	0	0	0	0
100	103	2	0	0	0	0	0	0	0	0	0	0
105	81	2	0	0	0	0	0	0	0	0	0	0
110	85	2	0	0	0	0	0	0	0	0	0	0
115	74	2	0	0	0	0	0	0	0	0	0	0
120	81	2	0	0	0	0	0	0	0	0	0	0
125	75	2	0	0	0	0	0	0	0	0	0	0
130	76	2	0	0	0	0	0	0	0	0	0	0
135	87	2	0	0	0	0	0	0	0	0	0	0
140	106	2	0	0	0	0	0	0	0	0	0	0
145	79	2	0	0	0	0	0	0	0	0	0	0
150	75	2	0	0	0	0	0	0	0	0	0	0
155	64	1	0	0	0	0	0	0	0	0	0	0
160	67	1	0	0	0	0	0	0	0	0	0	0
165	67	1	0	0	0	0	0	0	0	0	0	0
170	59	1	0	0	0	0	0	0	0	0	0	0
175	65	1	0	0	0	0	0	0	0	0	0	0
180	62	1	0	0	0	0	0	0	0	0	0	0
185	49	1	0	0	0	0	0	0	0	0	0	0
190	46	1	0	0	0	0	0	0	0	0	0	0
195	43	1	0	0	0	0	0	0	0	0	0	0
200	33	1	0	0	0	0	0	0	0	0	0	0
205	42	1	0	0	0	0	0	0	0	0	0	0
210	44	1	0	0	0	0	0	0	0	0	0	0
215	36	1	0	0	0	0	0	0	0	0	0	0
220	30	1	0	0	0	0	0	0	0	0	0	0
225	37	1	0	0	0	0	0	0	0	0	0	0
230	21	0	0	0	0	0	0	0	0	0	0	0
235	27	1	0	0	0	0	0	0	0	0	0	0
240	31	1	0	0	0	0	0	0	0	0	0	0
245	39	1	0	0	0	0	0	0	0	0	0	0
250	35	1	0	0	0	0	0	0	0	0	0	0
255	39	1	0	0	0	0	0	0	0	0	0	0
260	35	1	0	0	0	0	0	0	0	0	0	0
265	37	1	0	0	0	0	0	0	0	0	0	0
270	35	1	0	0	0	0	0	0	0	0	0	0
275	40	1	0	0	0	0	0	0	0	0	0	0
280	35	1	0	0	0	0	0	0	0	0	0	0
285	47	1	0	0	0	0	0	0	0	0	0	0
290	41	1	0	0	0	0	0	0	0	0	0	0
295	45	1	0	0	0	0	0	0	0	0	0	0
300	46	1	0	0	0	0	0	0	0	0	0	0
305	39	1	0	0	0	0	0	0	0	0	0	0
310	51	1	0	0	0	0	0	0	0	0	0	0
315	97	2	0	0	0	0	0	0	0	0	0	0
320	137	3	0	0	0	0	0	0	0	0	0	0
325	135	3	0	0	0	0	0	0	0	0	0	0
330	140	3	0	0	0	0	0	0	0	0	0	0
335	181	4	0	0	0	0	0	0	0	0	0	0
340	156	3	0	0	0	0	0	0	0	0	0	0
345	145	3	0	0	0	0	0	0	0	0	0	0
350	114	2	0	0	0	0	0	0	0	0	0	0
355	102	2	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 4909

FIG. 24B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 11.51/19/ 2/70 TO 13.58/25/ 3/70

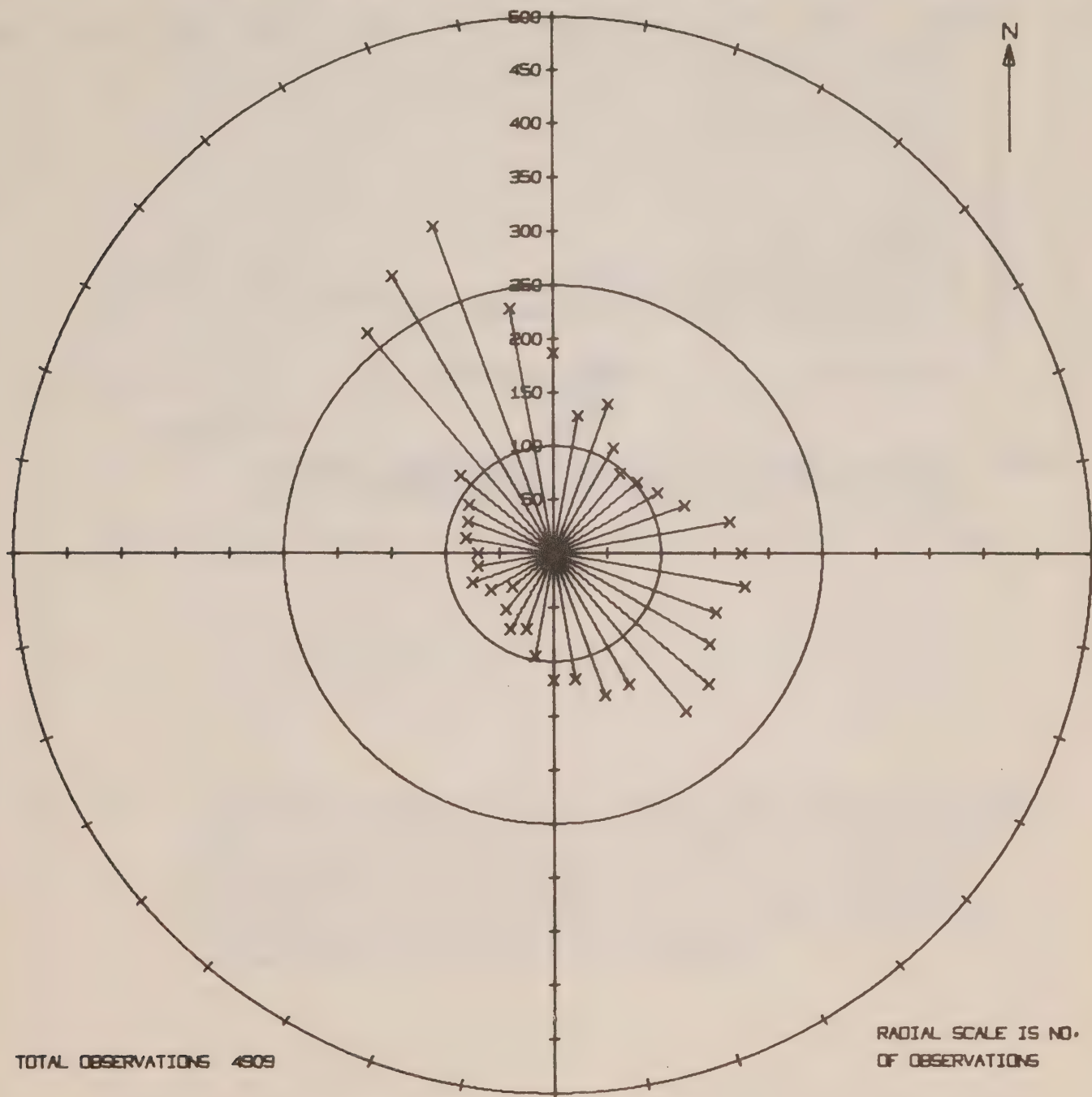


FIG. 24c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 11.51/19/ 2/70 TO 13.58/25/ 3/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	0	200	400	600	800	1000	1200	1400	1600	1800	2000
8.00	0	0	0	I	I	I	I	I	I	I	I	I	I
8.05	0	0	0										
8.10	0	0	0										
8.15	0	0	0										
8.20	0	0	0										
8.25	0	0	0										
8.30	0	0	0										
8.35	0	0	0										
8.40	0	0	0										
8.45	9	0	0										
8.50	22	0	0*										
8.55	53	1	0***										
8.60	120	2	0*****										
8.65	377	8	0*****										
8.70	712	15	0*****										
8.75	881	18	0*****										
8.80	1396	28	0*****										
8.85	983	20	0*****										
8.90	344	7	0*****										
8.95	12	0	0*										

NUMBER OF TEMP. GREATER THAN 8.95 = 0

NUMBER OF OBSERVATIONS = 4909

MEAN TEMP = 8.77 DEG. C.

FIG. 24D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

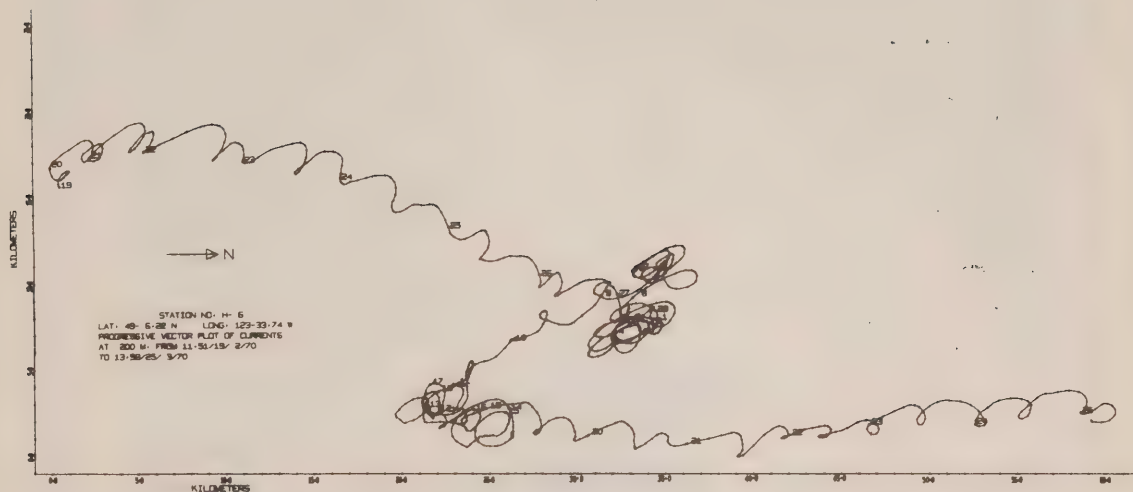


Fig. 24e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 34-day period during February 19 through March 25, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 15.58/25/ 3/70 TO 23. 8/25/ 4/70

MEAN SPEED	FREQUENCY NO.	PCT. I	0	100	200	300	400	500	600	700	800	900	1000
0	0	0	0										
10	150	3	0	*****									
20	70	2	0	*****									
30	120	3	0	*****									
40	236	5	0	*****									
50	254	6	0	*****									
60	507	11	0	*****									
70	335	7	0	*****									
80	495	11	0	*****									
90	280	6	0	*****									
100	260	6	0	*****									
110	319	7	0	*****									
120	170	4	0	*****									
130	217	5	0	*****									
140	155	3	0	*****									
150	197	4	0	*****									
160	97	2	0	*****									
170	99	2	0	*****									
180	125	3	0	*****									
190	65	1	0	*****									
200	91	2	0	*****									
210	52	1	0	*****									
220	62	1	0	*****									
230	34	1	0	***									
240	27	1	0	***									
250	33	1	0	***									
260	16	0	0	**									
270	18	0	0	**									
280	13	0	0	*									
290	5	0	0	*									
300	4	0	0										
310	5	0	0	*									

NUMBER OF SPEEDS GREATER THAN 310 = 0

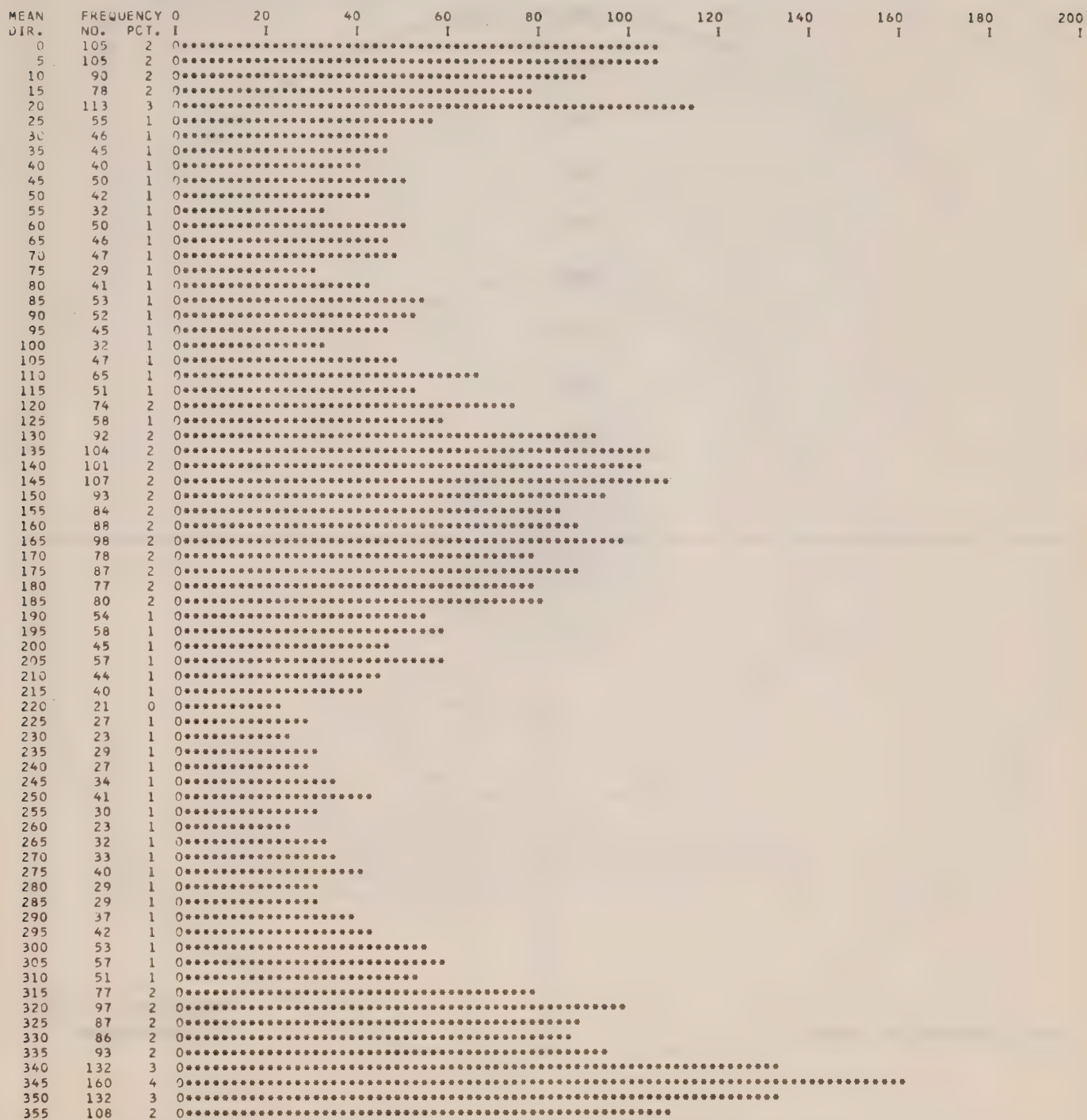
NUMBER OF OBSERVATIONS = 4508

MEAN SPEED = 101 MM/SEC

FIG. 25A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 31-DAY PERIOD DURING MARCH 25 THROUGH APRIL 25, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 15.58/25/ 3/70 TO 23. 8/25/ 4/70



NUMBER OF OBSERVATIONS = 4508

FIG. 25B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 31-DAY PERIOD DURING MARCH 25 THROUGH APRIL 25, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 15.58/25/ 3/70 TO 23. 8/25/ 4/70

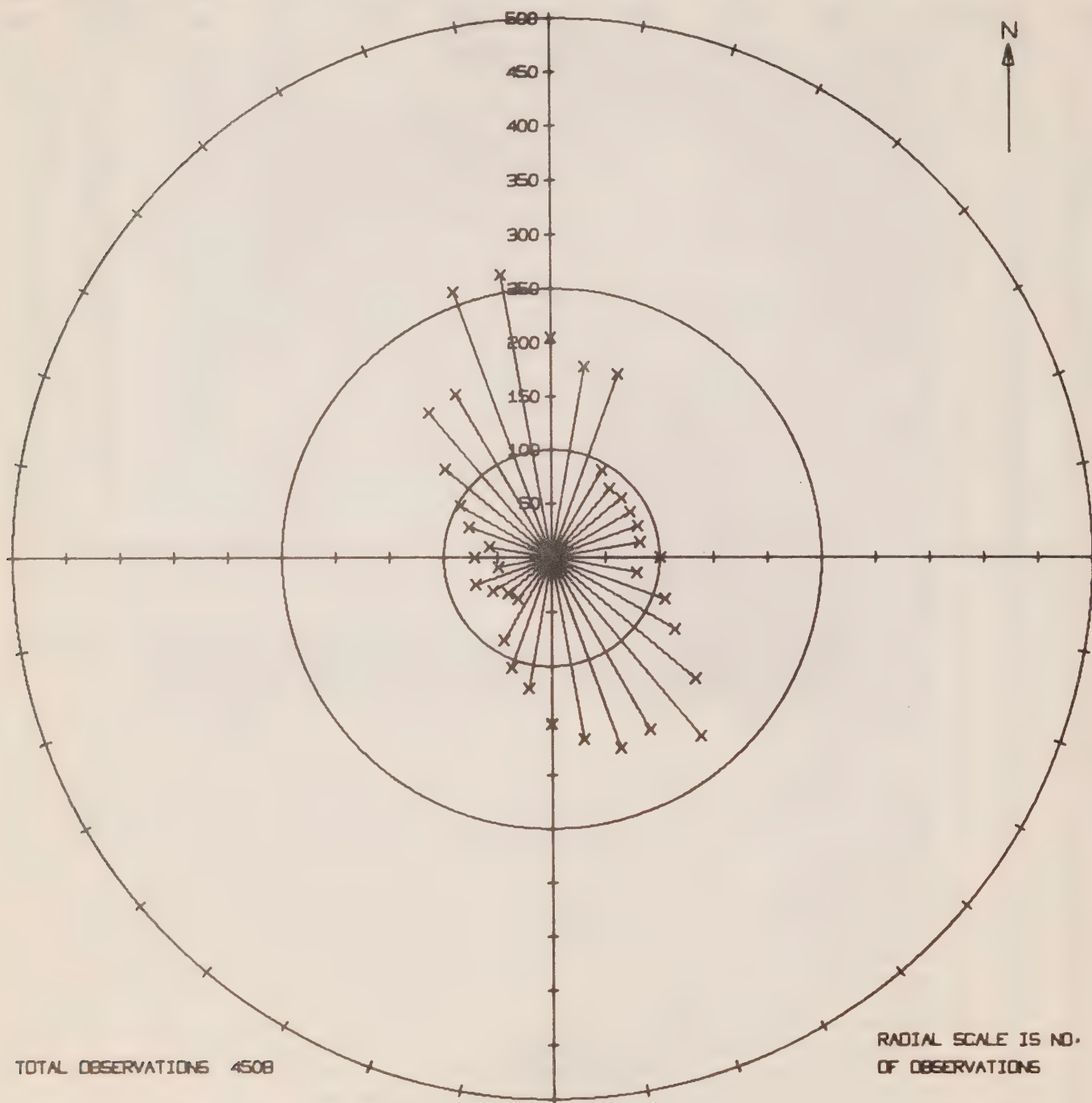


FIG. 25c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 31-DAY PERIOD DURING MARCH 25 THROUGH APRIL 25, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 15.58/25/ 3/70 TO 23. 8/25/ 4/70

MEAN TEMP.	FREQUENCY NO.	PCT.	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
6.00	0	0	0	0	0	0	0	0	0	0	0	0
6.05	0	0	0	0	0	0	0	0	0	0	0	0
6.10	0	0	0	0	0	0	0	0	0	0	0	0
6.15	0	0	0	0	0	0	0	0	0	0	0	0
6.20	0	0	0	0	0	0	0	0	0	0	0	0
6.25	0	0	0	0	0	0	0	0	0	0	0	0
6.30	0	0	0	0	0	0	0	0	0	0	0	0
6.35	0	0	0	0	0	0	0	0	0	0	0	0
6.40	0	0	0	0	0	0	0	0	0	0	0	0
6.45	0	0	0	0	0	0	0	0	0	0	0	0
6.50	0	0	0	0	0	0	0	0	0	0	0	0
6.55	0	0	0	0	0	0	0	0	0	0	0	0
6.60	0	0	0	0	0	0	0	0	0	0	0	0
6.65	0	0	0	0	0	0	0	0	0	0	0	0
6.70	0	0	0	0	0	0	0	0	0	0	0	0
6.75	0	0	0	0	0	0	0	0	0	0	0	0
6.80	1	0	0	0	0	0	0	0	0	0	0	0
6.85	0	0	0	0	0	0	0	0	0	0	0	0
6.90	0	0	0	0	0	0	0	0	0	0	0	0
6.95	0	0	0	0	0	0	0	0	0	0	0	0
7.00	0	0	0	0	0	0	0	0	0	0	0	0
7.05	0	0	0	0	0	0	0	0	0	0	0	0
7.10	0	0	0	0	0	0	0	0	0	0	0	0
7.15	0	0	0	0	0	0	0	0	0	0	0	0
7.20	0	0	0	0	0	0	0	0	0	0	0	0
7.25	0	0	0	0	0	0	0	0	0	0	0	0
7.30	0	0	0	0	0	0	0	0	0	0	0	0
7.35	0	0	0	0	0	0	0	0	0	0	0	0
7.40	0	0	0	0	0	0	0	0	0	0	0	0
7.45	0	0	0	0	0	0	0	0	0	0	0	0
7.50	0	0	0	0	0	0	0	0	0	0	0	0
7.55	0	0	0	0	0	0	0	0	0	0	0	0
7.60	1	0	0	0	0	0	0	0	0	0	0	0
7.65	1	0	0	0	0	0	0	0	0	0	0	0
7.70	0	0	0	0	0	0	0	0	0	0	0	0
7.75	0	0	0	0	0	0	0	0	0	0	0	0
7.80	0	0	0	0	0	0	0	0	0	0	0	0
7.85	0	0	0	0	0	0	0	0	0	0	0	0
7.90	0	0	0	0	0	0	0	0	0	0	0	0
7.95	0	0	0	0	0	0	0	0	0	0	0	0
8.00	0	0	0	0	0	0	0	0	0	0	0	0
8.05	0	0	0	0	0	0	0	0	0	0	0	0
8.10	0	0	0	0	0	0	0	0	0	0	0	0
8.15	0	0	0	0	0	0	0	0	0	0	0	0
8.20	0	0	0	0	0	0	0	0	0	0	0	0
8.25	0	0	0	0	0	0	0	0	0	0	0	0
8.30	26	1	0***									
8.35	146	3	0*****									
8.40	132	3	0*****									
8.45	152	3	0*****									
8.50	170	4	0*****									
8.55	249	6	0*****									
8.60	371	8	0*****									
8.65	600	13	0*****									
8.70	648	14	0*****									
8.75	676	15	0*****									
8.80	930	21	0*****									
8.85	356	8	0*****									
8.90	15	0	0**									
8.95	4	0	0									
9.00	0	0	0									
9.05	0	0	0									
9.10	0	0	0									
9.15	0	0	0									
9.20	5	0	0*									
9.25	6	0	0*									
9.30	4	0	0									
9.35	2	0	0									
9.40	1	0	0									
9.45	3	0	0									
9.50	2	0	0									
9.55	2	0	0									
9.60	1	0	0									
9.65	4	0	0									

NUMBER OF TEMP. GREATER THAN 9.65 = 0

NUMBER OF OBSERVATIONS = 4508

MEAN TEMP = 8.68 DEG. C.

FIG. 25D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 31-DAY PERIOD DURING MARCH 25 THROUGH APRIL 25 1970

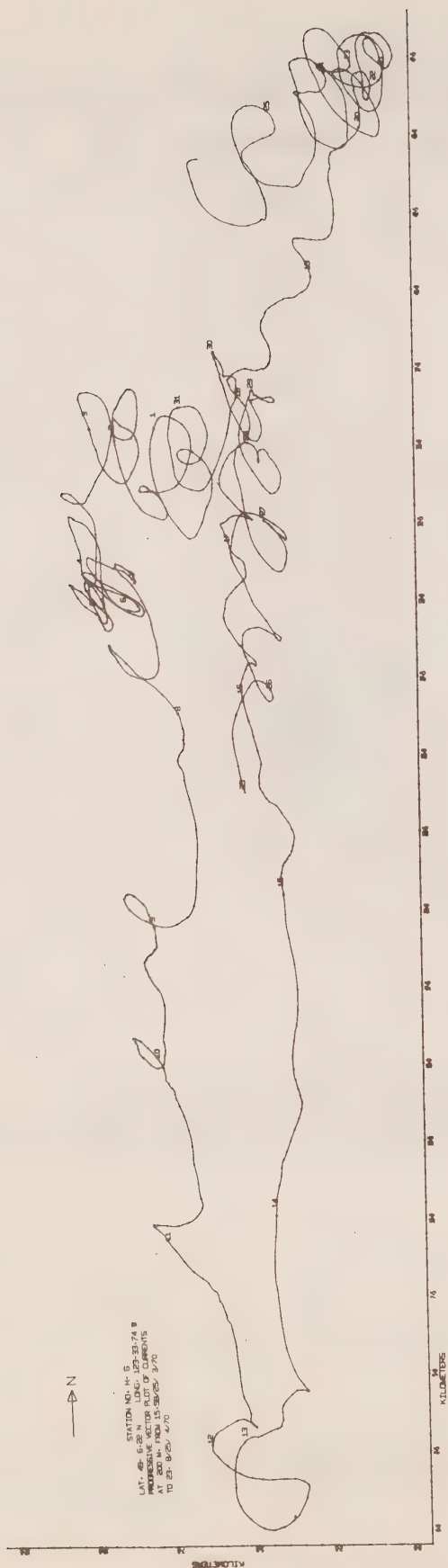


Fig. 25e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 31-day period during March 25 through April 25, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 14. 2/27/ 4/70 TO 13.19/ 8/ 6/70

MEAN SPEED	FREQUENCY NO.	PCT. I	0	100	200	300	400	500	600	700	800	900	1000
0	5	0	0	I	I	I	I	I	I	I	I	I	I
10	24	0	0**										
20	40	1	0****										
30	69	1	0*****										
40	175	3	0*****										
50	169	3	0*****										
60	364	6	0*****										
70	353	6	0*****										
80	745	12	0*****										
90	527	9	0*****										
100	498	8	0*****										
110	635	11	0*****										
120	325	5	0*****										
130	486	8	0*****										
140	264	4	0*****										
150	307	5	0*****										
160	159	3	0*****										
170	153	3	0*****										
180	182	3	0*****										
190	76	1	0*****										
200	119	2	0*****										
210	50	1	0*****										
220	83	1	0*****										
230	40	1	0****										
240	41	1	0****										
250	54	1	0*****										
260	35	1	0****										
270	24	0	0**										
280	13	0	0*										
290	9	0	0*										
300	3	0	0										
310	7	0	0*										
320	8	0	0*										
330	3	0	0										
340	0	0	0										
350	1	0	0										
360	0	0	0										
370	0	0	0										
380	0	0	0										
390	0	0	0										
400	0	0	0										
410	0	0	0										
420	0	0	0										
430	0	0	0										
440	0	0	0										
450	1	0	0										
460	0	0	0										
470	0	0	0										
480	0	0	0										
490	0	0	0										
500	0	0	0										
510	0	0	0										
520	0	0	0										
530	0	0	0										
540	0	0	0										
550	0	0	0										
560	0	0	0										
570	0	0	0										
580	0	0	0										
590	0	0	0										
600	0	0	0										
610	0	0	0										
620	1	0	0										

NUMBER OF SPEEDS GREATER THAN 620 = 0

NUMBER OF OBSERVATIONS = 6043

MEAN SPEED = 114 MM/SEC

FIG. 26A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 14. 2/27/ 4/70 TO 13.19/ 8/ 6/70

MEAN DIR.	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350	400	450	500
0	85	1	0*****		I	I	I	I	I	I	I	I	I
5	79	1	0*****										
10	66	1	0*****										
15	69	1	0*****										
20	102	2	0*****										
25	73	1	0*****										
30	77	1	0*****										
35	59	1	0*****										
40	70	1	0*****										
45	53	1	0*****										
50	59	1	0*****										
55	61	1	0*****										
60	64	1	0*****										
65	76	1	0*****										
70	65	1	0*****										
75	73	1	0*****										
80	76	1	0*****										
85	68	1	0*****										
90	91	2	0*****										
95	93	2	0*****										
100	96	2	0*****										
105	126	2	0*****										
110	132	2	0*****										
115	146	2	0*****										
120	134	2	0*****										
125	105	2	0*****										
130	109	2	0*****										
135	117	2	0*****										
140	123	2	0*****										
145	105	2	0*****										
150	91	2	0*****										
155	88	1	0*****										
160	84	1	0*****										
165	85	1	0*****										
170	62	1	0*****										
175	53	1	0*****										
180	43	1	0*****										
185	46	1	0*****										
190	45	1	0*****										
195	43	1	0*****										
200	51	1	0*****										
205	50	1	0*****										
210	31	1	0*****										
215	35	1	0*****										
220	47	1	0*****										
225	45	1	0*****										
230	43	1	0*****										
235	43	1	0*****										
240	37	1	0*****										
245	23	0	0*****										
250	37	1	0*****										
255	47	1	0*****										
260	45	1	0*****										
265	46	1	0*****										
270	42	1	0*****										
275	72	1	0*****										
280	64	1	0*****										
285	55	1	0*****										
290	69	1	0*****										
295	78	1	0*****										
300	73	1	0*****										
305	117	2	0*****										
310	103	2	0*****										
315	138	2	0*****										
320	167	3	0*****										
325	177	3	0*****										
330	162	3	0*****										
335	224	4	0*****										
340	167	3	0*****										
345	175	3	0*****										
350	147	2	0*****										
355	121	2	0*****										

NUMBER OF OBSERVATIONS = 6043

FIG. 26B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 14. 2/27/ 4/70 TO 13.19/ 8/ 6/70

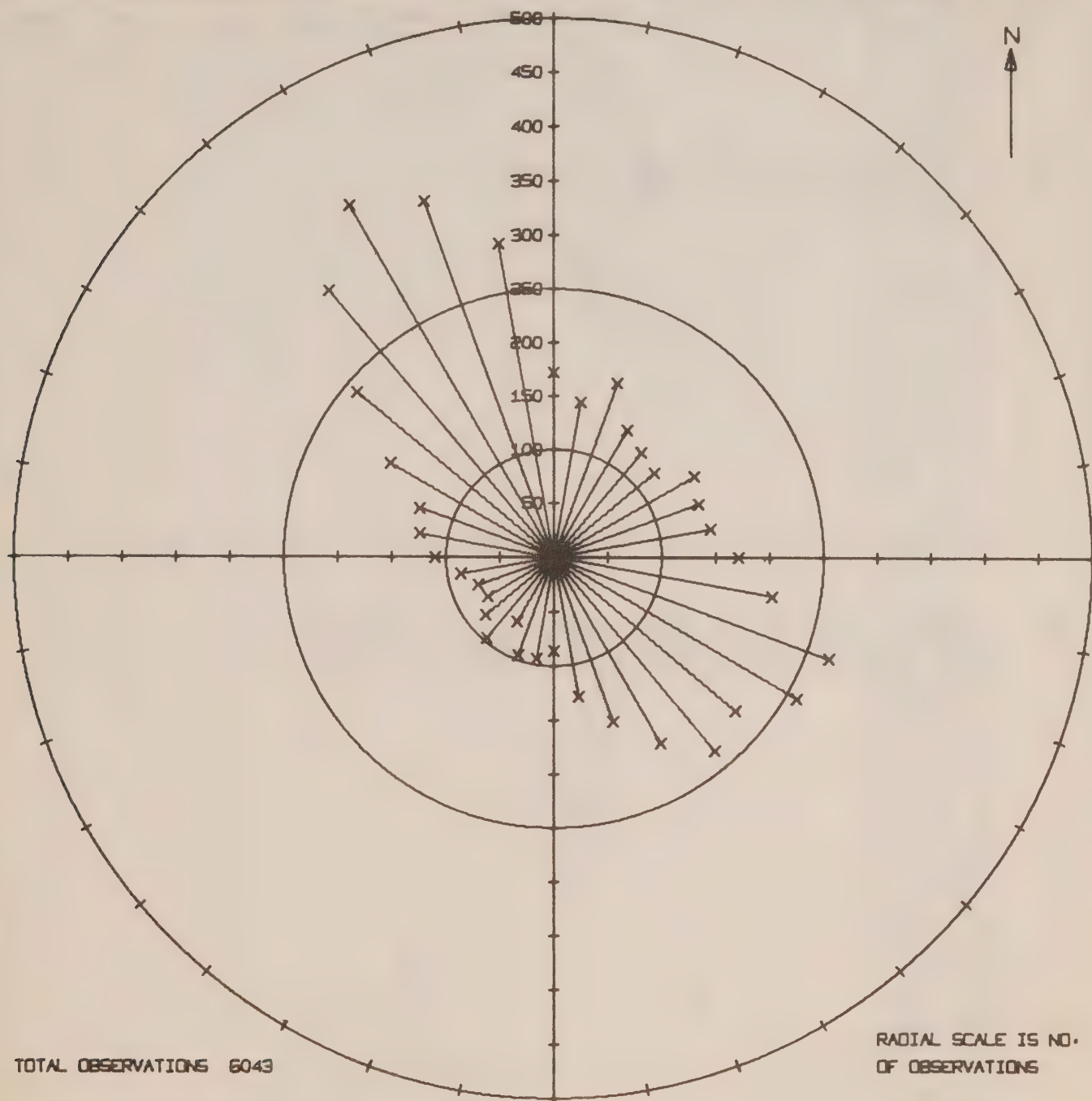


FIG. 26c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH JUNE 8, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 14. 2/27/ 4/70 TO 13.19/ 8/ 6/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	500 I	1000 I	1500 I	2000 I	2500 I	3000 I	3500 I	4000 I	4500 I	5000 I
8.00	0	0 0										
8.05	0	0 0										
8.10	0	0 0										
8.15	0	0 0										
8.20	0	0 0										
8.25	6	0 0										
8.30	127	2 0***										
8.35	1247	21 0*****										
8.40	2743	45 0*****										
8.45	1045	17 0*****										
8.50	612	10 0*****										
8.55	228	4 0*****										
8.60	19	0 0										
8.65	8	0 0										
8.70	3	0 0										
8.75	0	0 0										
8.80	0	0 0										
8.85	0	0 0										
8.90	0	0 0										
8.95	0	0 0										
9.00	0	0 0										
9.05	0	0 0										
9.10	0	0 0										
9.15	0	0 0										
9.20	0	0 0										
9.25	4	0 0										
9.30	0	0 0										
9.35	0	0 0										
9.40	0	0 0										
9.45	0	0 0										
9.50	1	0 0										

NUMBER OF TEMP. GREATER THAN 9.50 = 0

NUMBER OF OBSERVATIONS = 6043

MEAN TEMP = 8.41 DEG. C.

FIG. 26D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS
OBTAINED AT 10-MINUTE INTERVALS OVER 42-DAY PERIOD DURING APRIL 27 THROUGH
JUNE 8, 1970.

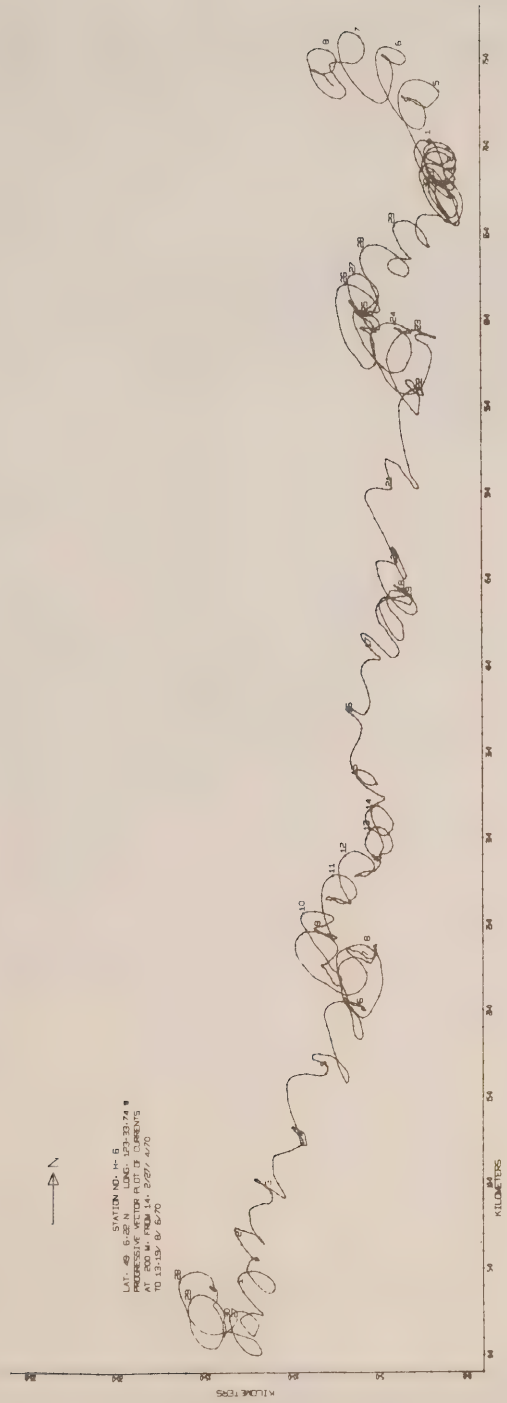


Fig. 26e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 42-day period during April 27 through June 8, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 9.10/10/ 6/70 TO 12.19/27/ 7/70

MEAN SPEED	FREQUENCY NO.	0 PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	0	0	0									
10	10	0	0*									
20	11	0	0*									
30	22	0	0**									
40	63	1	0*****									
50	50	1	0*****									
60	137	2	0*****									
70	191	3	0*****									
80	416	6	0*****									
90	437	6	0*****									
100	502	7	0*****									
110	655	10	0*****									
120	496	7	0*****									
130	684	10	0*****									
140	383	6	0*****									
150	572	8	0*****									
160	331	5	0*****									
170	325	5	0*****									
180	398	6	0*****									
190	215	3	0*****									
200	270	4	0*****									
210	140	2	0*****									
220	171	3	0*****									
230	80	1	0*****									
240	51	1	0*****									
250	77	1	0*****									
260	27	0	0***									
270	23	0	0**									
280	10	0	0*									
290	9	0	0*									
300	7	0	0*									
310	7	0	0*									
320	5	0	0*									
330	3	0	0									
340	3	0	0									
350	2	0	0									
360	2	0	0									
370	0	0	0									
380	0	0	0									
390	0	0	0									
400	0	0	0									
410	0	0	0									
420	0	0	0									
430	0	0	0									
440	0	0	0									
450	1	0	0									
460	0	0	0									
470	0	0	0									
480	0	0	0									
490	0	0	0									
500	1	0	0									
510	0	0	0									
520	0	0	0									
530	0	0	0									
540	0	0	0									
550	0	0	0									
560	0	0	0									
570	0	0	0									
580	0	0	0									
590	0	0	0									
600	0	0	0									
610	1	0	0									

NUMBER OF SPEEDS GREATER THAN 610 = 0

NUMBER OF OBSERVATIONS = 6788

MEAN SPEED = 137 MM/SEC

FIG. 27A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 47-DAY PERIOD DURING JUNE 10 THROUGH JULY 27, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H- B LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 9.10/10/ 6/70 TO 12.19/27/ 7/70

MEAN DIR.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
0	238	4	0	0	0	0	0	0	0	0	0	0	0
5	197	3	0	0	0	0	0	0	0	0	0	0	0
10	153	2	0	0	0	0	0	0	0	0	0	0	0
15	127	2	0	0	0	0	0	0	0	0	0	0	0
20	191	3	0	0	0	0	0	0	0	0	0	0	0
25	91	1	0	0	0	0	0	0	0	0	0	0	0
30	94	1	0	0	0	0	0	0	0	0	0	0	0
35	50	1	0	0	0	0	0	0	0	0	0	0	0
40	72	1	0	0	0	0	0	0	0	0	0	0	0
45	66	1	0	0	0	0	0	0	0	0	0	0	0
50	44	1	0	0	0	0	0	0	0	0	0	0	0
55	62	1	0	0	0	0	0	0	0	0	0	0	0
60	56	1	0	0	0	0	0	0	0	0	0	0	0
65	38	1	0	0	0	0	0	0	0	0	0	0	0
70	52	1	0	0	0	0	0	0	0	0	0	0	0
75	50	1	0	0	0	0	0	0	0	0	0	0	0
80	41	1	0	0	0	0	0	0	0	0	0	0	0
85	44	1	0	0	0	0	0	0	0	0	0	0	0
90	29	0	0	0	0	0	0	0	0	0	0	0	0
95	49	1	0	0	0	0	0	0	0	0	0	0	0
100	48	1	0	0	0	0	0	0	0	0	0	0	0
105	39	1	0	0	0	0	0	0	0	0	0	0	0
110	42	1	0	0	0	0	0	0	0	0	0	0	0
115	40	1	0	0	0	0	0	0	0	0	0	0	0
120	47	1	0	0	0	0	0	0	0	0	0	0	0
125	56	1	0	0	0	0	0	0	0	0	0	0	0
130	64	1	0	0	0	0	0	0	0	0	0	0	0
135	65	1	0	0	0	0	0	0	0	0	0	0	0
140	49	1	0	0	0	0	0	0	0	0	0	0	0
145	54	1	0	0	0	0	0	0	0	0	0	0	0
150	59	1	0	0	0	0	0	0	0	0	0	0	0
155	84	1	0	0	0	0	0	0	0	0	0	0	0
160	92	1	0	0	0	0	0	0	0	0	0	0	0
165	113	2	0	0	0	0	0	0	0	0	0	0	0
170	151	2	0	0	0	0	0	0	0	0	0	0	0
175	209	3	0	0	0	0	0	0	0	0	0	0	0
180	219	3	0	0	0	0	0	0	0	0	0	0	0
185	236	3	0	0	0	0	0	0	0	0	0	0	0
190	234	3	0	0	0	0	0	0	0	0	0	0	0
195	182	3	0	0	0	0	0	0	0	0	0	0	0
200	155	2	0	0	0	0	0	0	0	0	0	0	0
205	129	2	0	0	0	0	0	0	0	0	0	0	0
210	108	2	0	0	0	0	0	0	0	0	0	0	0
215	105	2	0	0	0	0	0	0	0	0	0	0	0
220	94	1	0	0	0	0	0	0	0	0	0	0	0
225	101	1	0	0	0	0	0	0	0	0	0	0	0
230	83	1	0	0	0	0	0	0	0	0	0	0	0
235	84	1	0	0	0	0	0	0	0	0	0	0	0
240	86	1	0	0	0	0	0	0	0	0	0	0	0
245	104	2	0	0	0	0	0	0	0	0	0	0	0
250	96	1	0	0	0	0	0	0	0	0	0	0	0
255	77	1	0	0	0	0	0	0	0	0	0	0	0
260	56	1	0	0	0	0	0	0	0	0	0	0	0
265	56	1	0	0	0	0	0	0	0	0	0	0	0
270	51	1	0	0	0	0	0	0	0	0	0	0	0
275	59	1	0	0	0	0	0	0	0	0	0	0	0
280	59	1	0	0	0	0	0	0	0	0	0	0	0
285	54	1	0	0	0	0	0	0	0	0	0	0	0
290	37	1	0	0	0	0	0	0	0	0	0	0	0
295	57	1	0	0	0	0	0	0	0	0	0	0	0
300	46	1	0	0	0	0	0	0	0	0	0	0	0
305	44	1	0	0	0	0	0	0	0	0	0	0	0
310	61	1	0	0	0	0	0	0	0	0	0	0	0
315	62	1	0	0	0	0	0	0	0	0	0	0	0
320	75	1	0	0	0	0	0	0	0	0	0	0	0
325	90	1	0	0	0	0	0	0	0	0	0	0	0
330	107	2	0	0	0	0	0	0	0	0	0	0	0
335	134	2	0	0	0	0	0	0	0	0	0	0	0
340	137	2	0	0	0	0	0	0	0	0	0	0	0
345	169	2	0	0	0	0	0	0	0	0	0	0	0
350	208	3	0	0	0	0	0	0	0	0	0	0	0
355	177	3	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 6788

FIG. 27B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 47-DAY PERIOD DURING JUNE 20 THROUGH JULY 27, 1970.

STATION NO. H- 6

LAT. 48- 6.22 N

LONG. 123-33.74 W

DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 9.10/10/ 6/70 TO 12.19/27/ 7/70

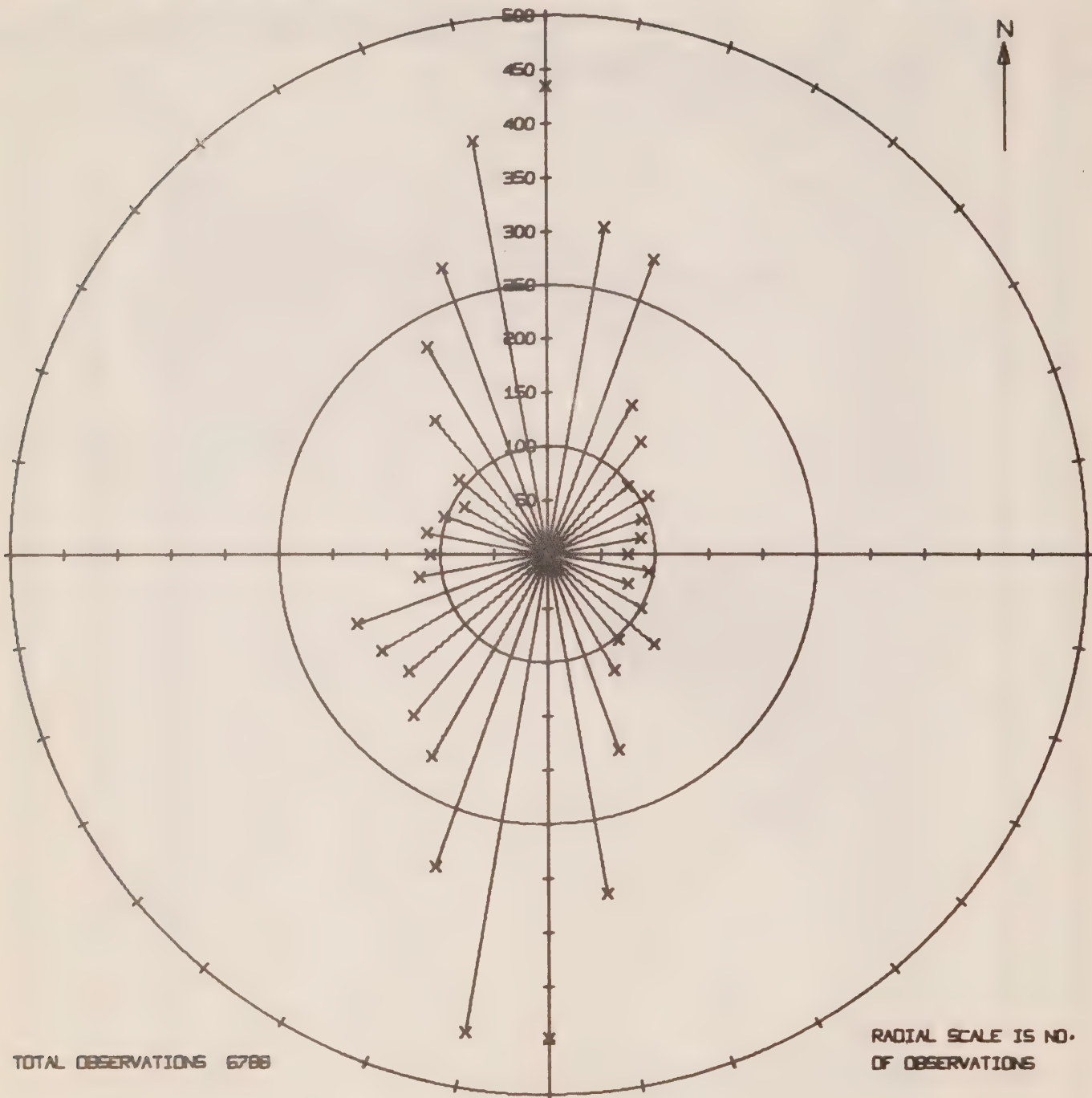


FIG. 27c.

A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 47-DAY PERIOD DURING JUNE 10 THROUGH JULY 27, 1970.

STATION NO. H- 6 LAT. 49- 6.22 N LONG. 123-33.74 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 9.10/10/ 6/70 TO 12.19/27/ 7/70

MEAN TEMP.	FREQUENCY NO.	0 PCT. I	500 I	1000 I	1500 I	2000 I	2500 I	3000 I	3500 I	4000 I	4500 I	5000 I
6.00	0	0 0										
6.05	0	0 0										
6.10	0	0 0										
6.15	0	0 0										
6.20	0	0 0										
6.25	0	0 0										
6.30	0	0 0										
6.35	0	0 0										
6.40	0	0 0										
6.45	0	0 0										
6.50	24	0 0										
6.55	51	1 0*										
6.60	736	11 0*****										
6.65	348	5 0*****										
6.70	1091	16 0*****										
6.75	2990	44 0*****										
6.80	671	10 0*****										
6.85	412	6 0*****										
6.90	222	3 0****										
6.95	153	2 0****										
7.00	24	0 0										
7.05	15	0 0										
7.10	33	0 0*										
7.15	6	0 0										
7.20	6	0 0										
7.25	6	0 0										

NUMBER OF TEMP. GREATER THAN 7.25 = 0

NUMBER OF OBSERVATIONS = 6788

MEAN TEMP = 6.74 DEG. C.

FIG. 27d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 47-DAY PERIOD DURING JUNE 10 THROUGH JULY 27, 1970.

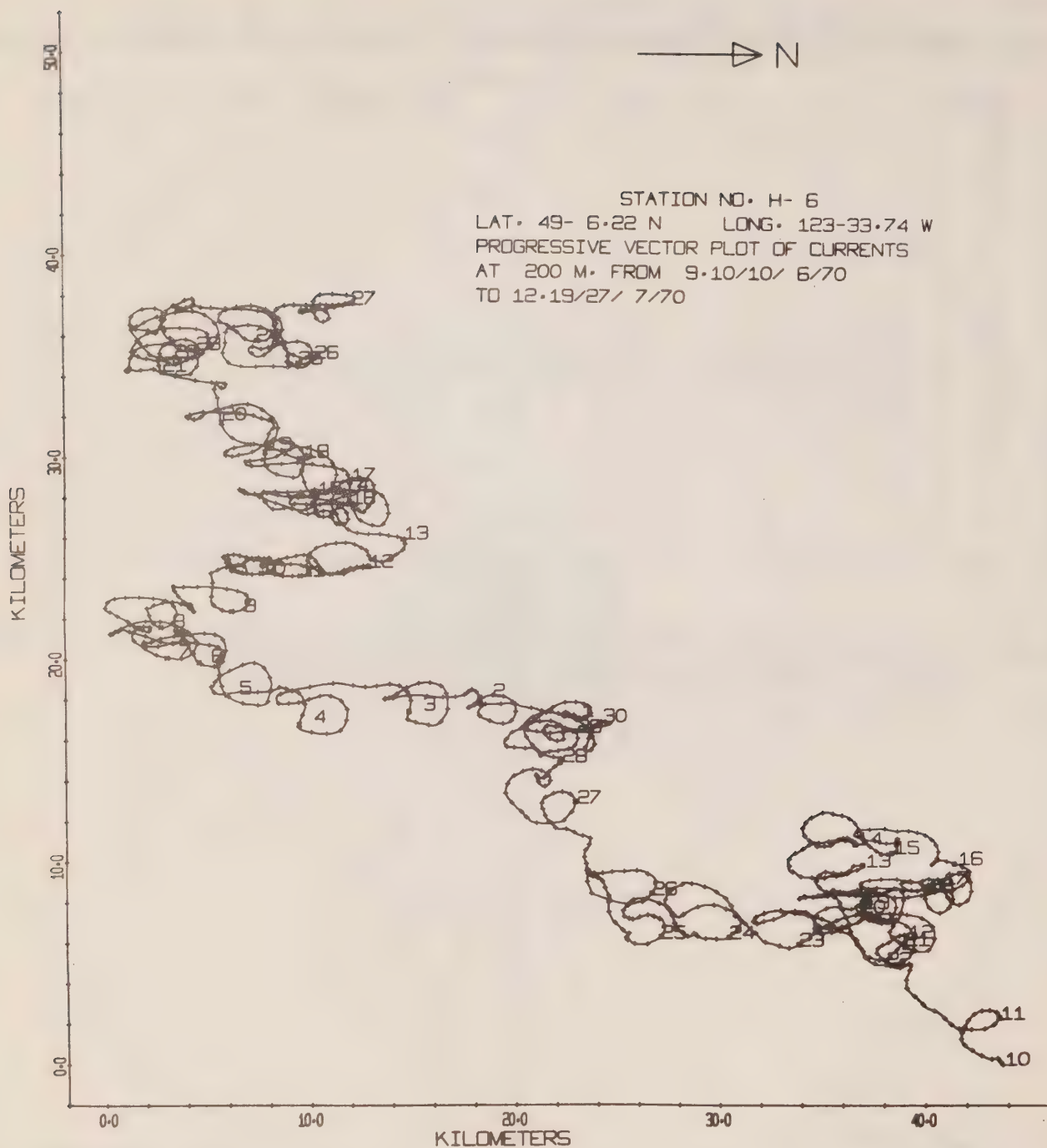


Fig. 27e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 47-day period during June 10 through July 27, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

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**SUMMARY OF OCEANOGRAPHIC RECORDS
OBTAINED FROM MOORED INSTRUMENTS
IN THE STRAIT OF GEORGIA — 1969-1970
Current Velocity and Seawater Temperature
from Station H-16**

S. Tabata, J.A. Stickland



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MARINE SCIENCES BRANCH, PACIFIC REGION
PACIFIC MARINE SCIENCE REPORT NO. 72-8

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by

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May, 1972

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INTRODUCTION

The waters of the Strait of Georgia have been the subject of many oceanographic studies for more than half a century. The earlier studies of the region consisted mainly of physical, chemical and biological oceanographic descriptions of the waters and some of the main factors affecting the properties of the waters therein. The studies vary, in scope, from a brief initial description of the waters by Fraser and Cameron (1916) and a more detailed work by Hutchinson and Lucas (1931) and to a more complete treatment by Waldichuk (1957), to name a few.

In spite of the number of oceanographic studies made on these waters there was a notable lack of reliable information of the surface and subsurface circulation in the Strait. In order to relieve this deficiency, the Pacific Oceanographic Group embarked on a limited program of current velocity observations in the central portion of the Strait of Georgia. The initial observations consisted only of surface drift measurements, the results of which have already been reported (Giovando and Tabata, 1970) and a series of velocity profile measurements from anchored vessels, the results of which have also been reported (Tabata, Stickland, Wong and Giovando, 1970 (a); 1970(b); 1970(c)).

In recent years the marine technology associated with automated oceanographic observations from moored instruments has advanced to the stage where it is now possible to obtain reliable data from unattended instruments for periods exceeding one month. The present series of observations to be reported here are based on data obtained from such instruments.

The primary objective of the present program of observations is to obtain current velocity records at sufficiently high frequency and of sufficient length so that it would be possible to examine the spectrum of the variability of current velocities in the frequency band between 1 cycle and 10^{-3} cycle per hour (period of few hours to few months approximately), at a representative area of the central Strait. Such data would provide, in addition to basic scientific information, solid background material that would be useful in a variety of applied oceanographic studies such as those associated with pollution and fisheries. As most of the instruments employed recorded temperatures of the water as well as current velocities, they too are reported.

A report describing the observational program, performances of current meters used, mooring technique, computer data-processing method, etc. has already been published in the Technical Report Series of the Fisheries Research Board of Canada (Tabata, Stickland and de Lange Boom, 1971). The summary of observations obtained from Station H-06 has already been published in Pacific Marine Science Report No. 72-7 (Tabata and Stickland, 1972).

The present report comprises the summary of oceanographic measurements obtained from Station H-16 (Fig. 1 and 2). It is the third of the series of reports associated with the program of oceanographic observations from moored instruments in the Strait of Georgia to be issued.

The summary contains:

- 1) histogram of current speed
- 2) histogram of current direction
- 3) histogram of current direction in polar form
- 4) histogram of temperature (if applicable)
- 5) progressive vector diagram of current velocities

Local standard time, Pacific Standard Time (P.S.T.), is used throughout (time zone + 8).

BACKGROUND INFORMATION

The only current measurements made in the open waters of the Strait, prior to 1953, were by means of drift bottles. They were carried out under the direction of Dr. W.A. Clemens. The data so obtained have been used later to interpret the surface circulation in the Strait of Georgia, (Waldichuk, 1957; Waldichuk, 1958).

In 1953, for the first time in the Strait, current observations were made at 8 fixed locations in the Strait from an anchored ship (Waldichuk, 1957). They were generally taken at hourly intervals at selected depths for a period of one tidal day (25 hours) at each station. While surface currents were observed by means of a customary captive drift pole, subsurface currents were measured with an Ekman Current Meter.

A year later, a series of 6 stations was occupied between Tsawwassen and Galiano Island (Fig. 1) and surface and bottom currents were measured for one tidal day at each of the stations (Pickard, 1956). The surface currents were observed at half-hourly intervals utilizing a drift pole while the bottom currents were measured with an Ekman Current Meter at hourly intervals.

During the summer of 1963 a series of 3 stations in a line between Nanaimo and Sechart (Fig. 1) was occupied by the Canadian Hydrographic Service and currents were measured at depths of 5, 100 and 300 metres (m) with self-recording BBT (Neyrpic) current metres (analogue output) at each of these stations at 20-minute intervals for period up to 30 days (Huggett, 1966). The method used to obtain the data represents a significant improvement over previous methods. However, even when currents were measured in this manner, the results indicated inconsistency in the day-to-day flow patterns although the 15-day averages did indicated the presence of clockwise rotary tidal currents.

LOCATION OF STATIONS

A line of 3 stations, H-06, H-16 and H-26, placed 10 kilometres (km) apart, was established between Valdes Island to the west and Point Grey to the east in April 1969 (Fig. 1). They remained stationed until the completion of the survey in September 1970. As is evident from Fig. 2, the western half of the line is deeper than the eastern side, the maximum depth being located a few kilometres east of Station H-06. The small ridge shown to the east of Station H-16 is part of a shoal having a minimum depth of 146m and situated within a few kilometres to the southeast of the ridge shown in the Figure.

The positions* and the depths of the 3 stations are:

H-06	Latitude 49°06.23'N Longitude 123° 33.70'W Depth 252m
H-16	Latitude 49° 09.07'N Longitude 123° 26.75'W Depth 295m
H-26	Latitude 49° 11.93'N Longitude 123° 19.80'W Depth 162m

* The exact locations of these stations are generally within one-half mile of those indicated above.

COMMENTS

Station H-16

Subsurface-Buoy Mooring

April 16 through May 15, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 98) 29-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 97) 29-day period. Current speed unreliable from April 22, 1969 onward. Noted loose rotor during subsequent mooring.

May 15 through June 18, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 98) 34-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 97) 34-day period. Loose rotor noted. Histo- gram of current speed not made.

Note: Profiles of current velocities in upper 50m depth obtained at the position of surface buoy, employing Hydro Products current meter during 0820 on May 21, 1969 through 1005 on May 23, 1969. Hydro-graphic cast made at 0817 on May 23, 1969. Bathythermograph observations made at 0855 on May 23, 1969.

June 18 through July 28, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 98) 22-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 97) 22-day period. No comment.

July 10 through August 28, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 98) 49-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 97) 43-day period. Clock inoperative when re- trieved. Sampling intervals assumed to be same as during previous observations. Time of clock stoppage (August 22) estimated from number of observations made.

August 28 through September 18, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 98) 21-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 97) 21-day period. Temperature unreliable from September 6th. Temperature histogram com- piled from 9 days of observations only.

September 18 through October 16, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 98) 28-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 97) 28-day period. Temperature record erratic - not included in this data report.

COMMENTS (cont'd)

October 16 through November 25, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 98) 40-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 97) 27-day period. Clock inoperative when current meter retrieved. Sampling intervals assumed to be same as during previous observations. Time of clock stoppage (November 12) estimated from number of observations made.

Note: Bathythermograph observations and hydrographic cast made at 1130 and 1135, respectively on November 25, 1969.

November 25, 1969 through January 9, 1970.

Instrument Depth: 40m	Geodyne*Current Meter (Serial No. M-187) 45-day period. This instrument used to back up instrument (Aanderaa meter No. 97) placed at 50m depth.
50m	Aanderaa Current Meter (Serial No. 97) This instrument failed to operate, but not for the reason suspected (clock failure). Poor battery connection was the cause of malfunction.
200m	Aanderaa Current Meter (Serial No. 98) 45-day period. No comment.

January 9 through February 20, 1970.

Instrument Depth: 50m	Geodyne Current Meter (Serial No. M-183) 41-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 98) 41-day period. Clock operating when instrument retrieved but number of observations showed that clock stopped approximately 7 hours before meter retrieved, if sampling rate assumed to be same as during previous observations. Clock probably started again when instrument shaken during retrieval.

Note: Bathythermograph observation and hydrographic cast made at 1420 on January 9, 1970.

February 20 through March 25, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 98) 33-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 101) 33-day period. No comment.

March 25 through April 28, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 98) 32-day period. Last 2 days of records "dirty" - not included in this data report.
200m	Aanderaa Current Meter (Serial No. 101) 34-day period. No comment.

COMMENTS (cont'd)

Taut-Rope Mooring

April 28 through June 10, 1970.

Instrument Depth: 3m	Geodyne Current Meter (Serial No. M-183) 36-day period. Meter lifted out of water for 1 minute at 0825 on May 25, 1970 for inspection. Processed data showed meter stopped operating on June 3, 1970. But clock operating when meter retrieved. Clock probably started to operate when hit by barge.
50m	Aanderaa Current Meter (Serial No. 98) 43-day period. No comment.
200m	Aanderaa Current Meter (Serial No. 101) 43-day period. No comment.

Note: Gap of 2 days present between start of this series of measurements and end of previous one. Surface buoy ran over by a barge of June 9, 1970, damaging Geodyne current meter (M-183) placed at 3m depth and Aanderaa current meter (98) placed at 50m depth (by tow line).

June 14 through July 28, 1970.

Instrument Depth: 3m	Geodyne Current Meter (Serial No. M-183) 39-day period. Processed data showed meter stopped operating on July 23, 1970.
50m	Aanderaa Current Meter (Serial No. 100) 44-day period. No comment.

Note: Gap of 4 days present between start of this series of measurements and end of previous one.

July 28 through September 24, 1970.

Instrument Depth: 3m	Geodyne Current Meter (Serial No. M-228) 29-day period. Snagged by gill net. Processed data showed that accident occurred on September 3, 1970.
50m	Aanderaa Current Meter (Serial No. 100) 58-day period. No comment.

- * It is to be noted that while the Aanderaa (Bergen) Current Meter used in the present program was made to sample every 10 minutes, the Geodyne Current Meter was set to "burst-sample" every 15 minutes (that is, every 15 minutes it recorded 15 samples at 5-second intervals).

ACKNOWLEDGEMENT

The acquisition of, and the processing of oceanographic data obtained from moored instruments require the assistance and cooperation of many individuals and groups. We acknowledge the assistance rendered by the staff of the Nanaimo Biological Station of the Fisheries Research Board of Canada, of the Pacific Oceanographic Group of the Marine Sciences Branch (now at the Pacific Environment Institute at West Vancouver, B.C.), of the Tidal and Current Survey of the Marine Sciences Branch and the officers and men of the research vessels, C.G.S. *Parizeau* (M.S.B.), C.G.S. *Vector* (M.S.B.) and C.G.S. *A.P. Knight* (F.R.B.C.). Individuals associated with the above were duly acknowledged in our first report. Since the publication of the first report in 1971, a number of people have assisted in the computer-processing of data and in the preparation of illustrations. We appreciate the generous assistance given by Mr. J.A.C. Thomson and Mrs. A. Sandnes of the Computing Centre at the Nanaimo Biological Station, Messrs. B. de Lange Boom and I. Daniel who processed the data, Miss T.A. Findlay who prepared the illustrations, and Mr. C. Morley of the Nanaimo Biological Station and Mr. R. Banyard of the Canadian Hydrographic Service of the Marine Sciences Branch who photo-reproduced all the illustrations. We owe our thanks to Miss M. Dyer for organizing and making the preparatory work essential to the publication of this report.

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1958. Drift bottle observations in the Strait of Georgia. J. Fish. Res. Bd. Canada 15: 1065-1102.

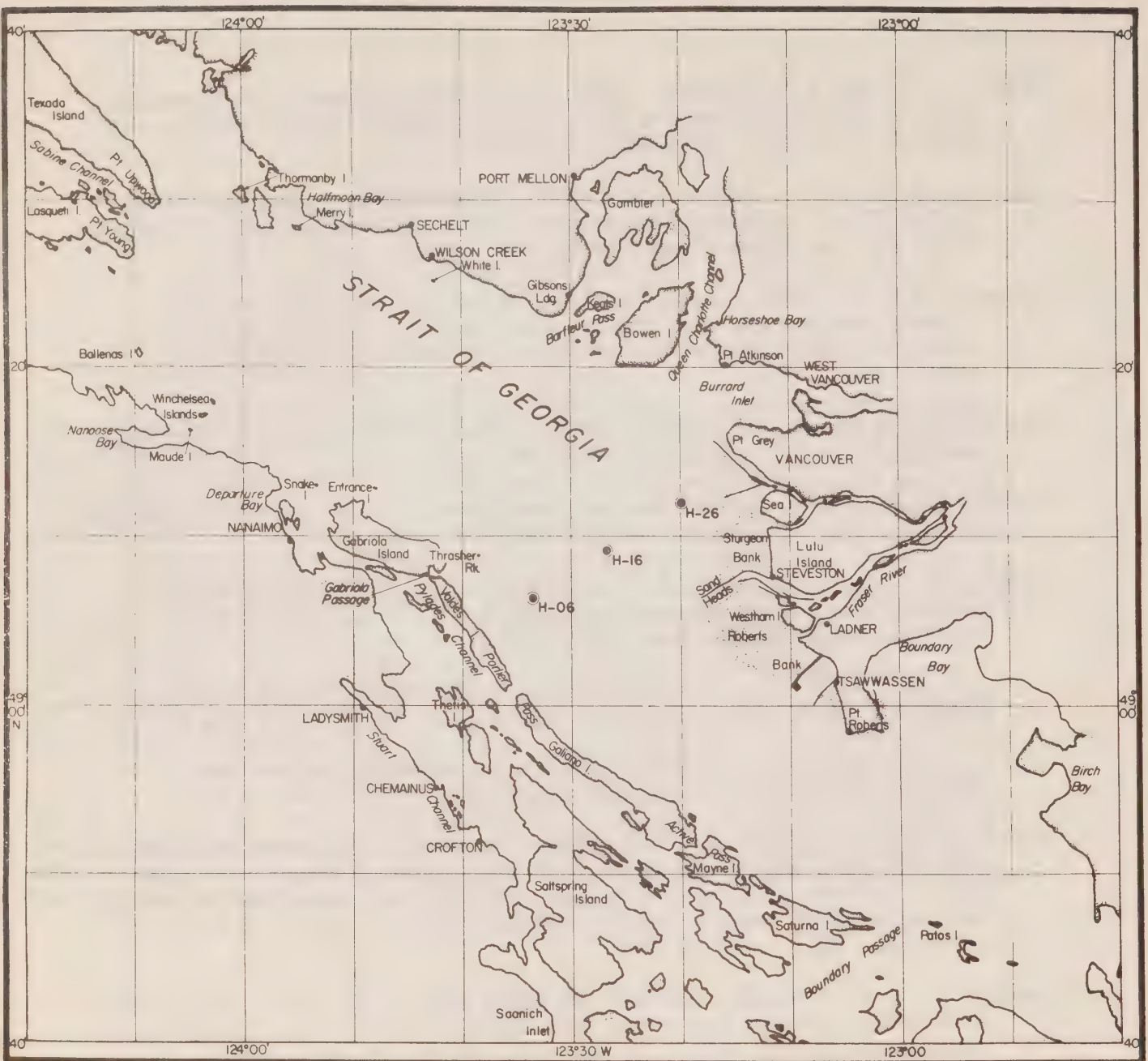


Fig. 1. Location of stations in the central Strait of Georgia where observations were made. The records described in this report were obtained at Station H-16.

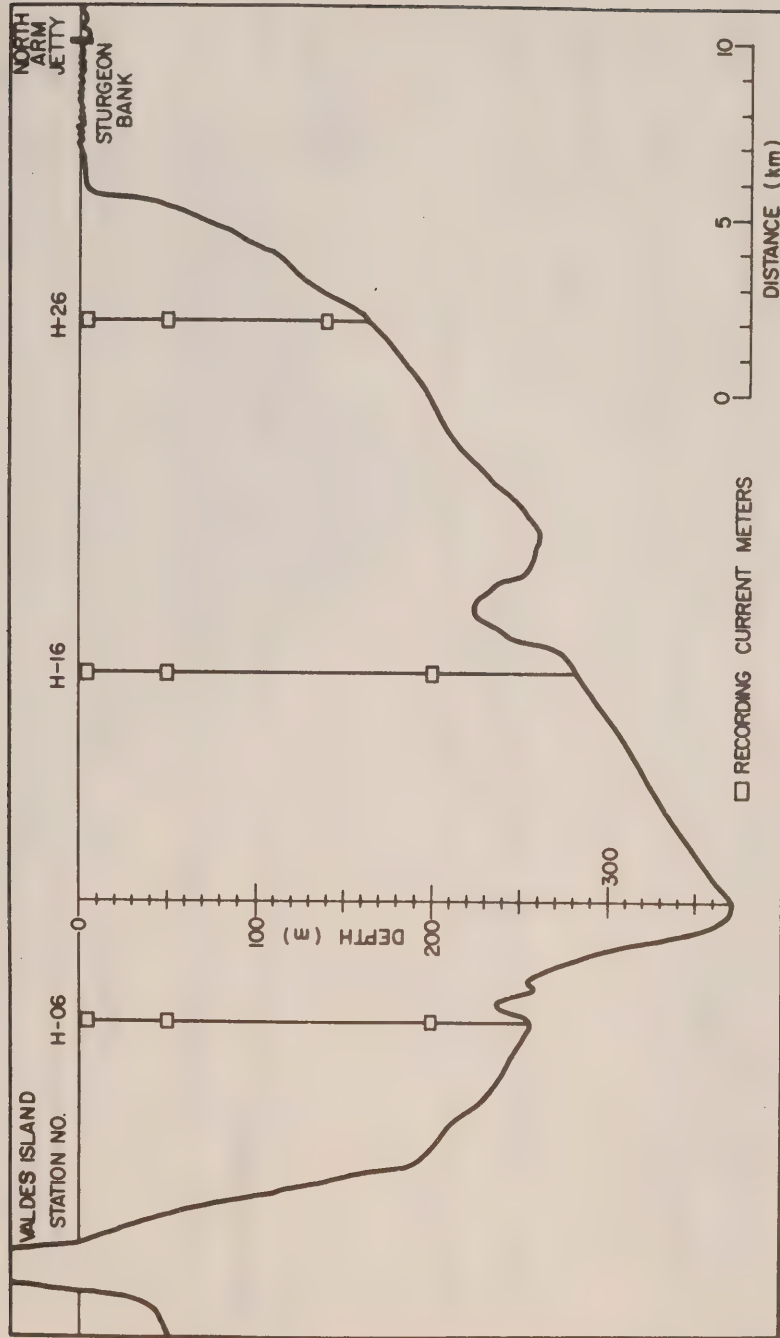


Fig. 2. Cross-section along the line of stations H-06, H-16 and H-26, between Valdes Island and Point Grey. The records described in this report were obtained at Station H-16.

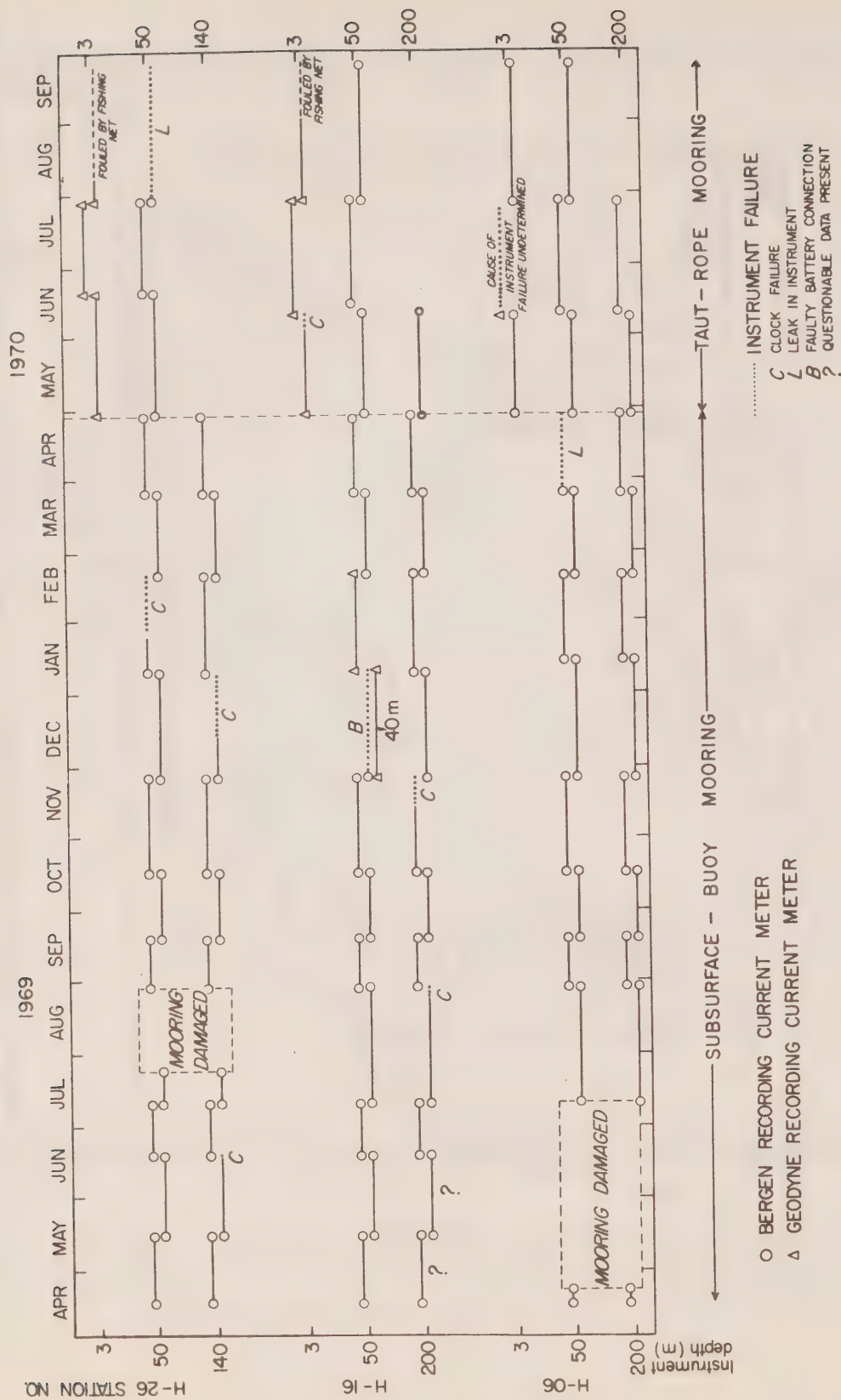


Fig. 3. Schematic drawing showing summary of events that occurred during the program of observations during 1969-1970. The records described in this report were obtained at Station H-16.


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TOTAL NUMBER OF INPUT DATA = 40763 AVERAGE VALUE = 60.97 CM/SEC

NUMBER OF DATA OUT OF RANGE = 1164

SPANNING RANGE
 FROM 11-28 10:20:00
 TO 11-28 21:06:05

NUMBER OF NON-STANDARD RECORDS = 0
 NUMBER OF CHECKSUM ERRORS = 0

END OF RECORDS JUL 30, 1970

A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10 MINUTE INTERVALS OVER 36-DAY PERIOD DURING APRIL 28 THROUGH JUNE 3, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".



TOTAL NUMBER OF INPUT DATA = 08700 WITH AVERAGE VALUE = 100.00 DEGREES
 NUMBER OF DATA OUT OF RANGE = 0
 OF RANGE
 FROM 70 = 14 0.00 10.00.00
 TO 70 = 11 0.00 01.00.00

FIG. 4b. A HISTOGRAM OF DIRECTION (TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 36-DAY PERIOD DURING APRIL 28 THROUGH JUNE 3, 1970.

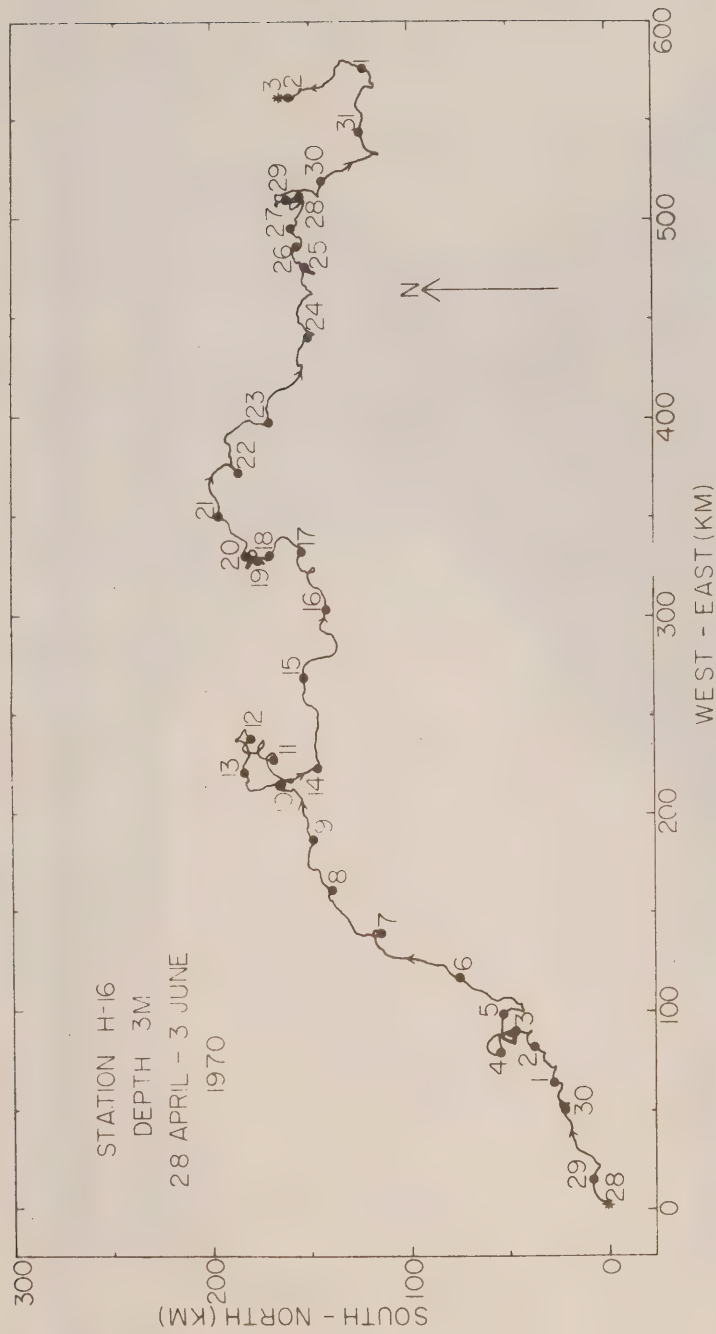


Fig. 4c.

A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 36-day period during April 28 through June 3, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

-99 640/ 18122 AUG 28, 1970

A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10 MINUTE INTERVALS OVER 44-DAY PERIOD DURING JUNE 14 THROUGH JULY 23, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

FIG. 5B. A HISTOGRAM OF DIRECTION (*TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 44-DAY PERIOD DURING JUNE 14 THROUGH JULY 23, 1970.

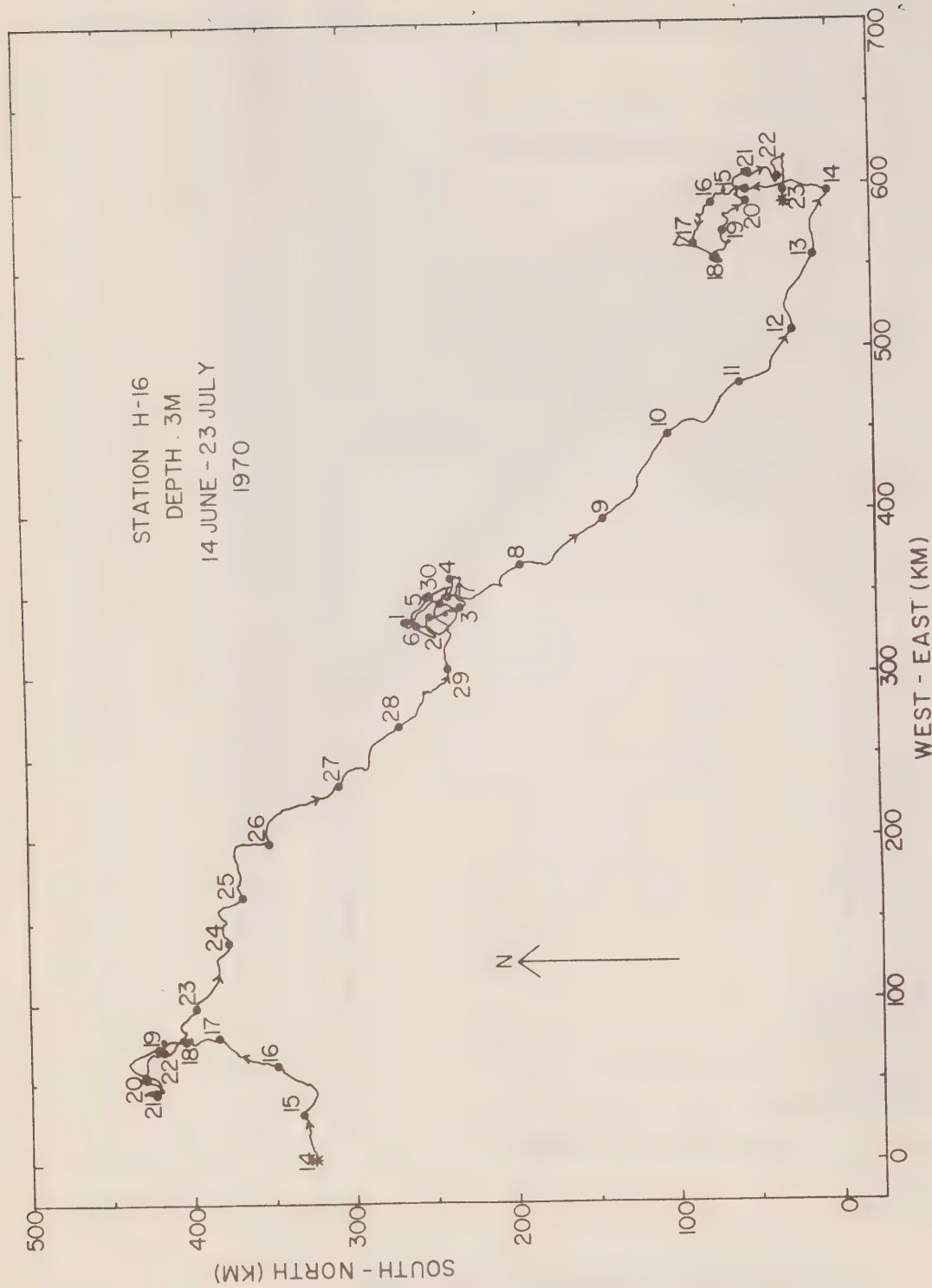


Fig. 5c. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 44-day period during June 14 through July 23, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

BAR PLAT	DATA/ NUMBER/ / SPEED	FREQUENCY	CM/SEC
W		2	2.0
W		12	1.0
W		11	2.0
W		4	3.0
W		7	4.0
W		4	5.0
W		4	6.0
W		1	7.0
W		4	8.0
W		3	9.0
W		7	10.0
W		7	11.0
W		8	12.0
W		1	13.0
W		4	14.0
W		3	15.0
W		2	16.0
W		14	17.0
W		6	18.0
W		10	19.0
W		15	20.0
W		18	21.0
W		27	22.0
W		84	23.0
W		73	24.0
W		96	25.0
W		172	26.0
W		184	27.0
W		177	28.0
W		183	29.0
W		187	30.0
W		198	31.0
W		208	32.0
W		202	33.0
W		279	34.0
W		278	35.0
W		468	36.0
W		468	37.0
W		473	38.0
W		466	39.0
W		466	40.0
W		509	41.0
W		473	42.0
W		469	43.0
W		469	44.0
W		500	45.0
W		508	46.0
W		508	47.0
W		507	48.0
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W		508	96.0
W		508	97.0
W		508	98.0
W		508	99.0
W		508	100.0
W		187	101.0
W		117	102.0
W		111	103.0
W		88	104.0
W		83	105.0
W		70	106.0
W		48	107.0
W		87	108.0
W		48	109.0
W		48	110.0
W		23	111.0
W		37	112.0
W		40	113.0
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W		36	117.0
W		49	118.0
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W		24	121.0
W		30	122.0
W		41	123.0
W		38	124.0
W		29	125.0
W		28	126.0
W		27	127.0
W		10	128.0
W		10	129.0
W		13	130.0
W		17	131.0
W		12	132.0
W		11	133.0
W		8	134.0
W		8	135.0
W		8	136.0
W		10	137.0
W		8	138.0
W		8	139.0
W		4	140.0
W		17	141.0
W		9	142.0
W		9	143.0
W		8	144.0
W		8	145.0
W		19	146.0
W		6	147.0
W		8	148.0
W		8	149.0

TOTAL NUMBER OF INPUT DATA = 49096 WITH AVERAGE VALUE = 68.03 CM/SEC

NUMBER OF DATA OUT OF RANGE = 881

SPANNING RANGE
FROM 70.0 TO 111.0
TO 111.0

NUMBER OF NONSTANDARD RECORDS = 0
NUMBER OF CHECKSUM ERRORS = 0

JOB END/ 18109 JAN 08, 1971

FIG. 6A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 37-DAY PERIOD DURING JULY 28 THROUGH SEPTEMBER 3, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

TOTAL NUMBER OF INPUT DATA • 49096 , WITH AVERAGE VALUE • 155.90 DEGREES

SPANNING RANGE
FROM 700 VII-88 09:03:00
TO 700 IX-02 23:49:05

FIG. 6a. A HISTOGRAM OF DIRECTION ("TRUE"), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 37-DAY PERIOD DURING JULY 28 THROUGH SEPTEMBER 3, 1970.

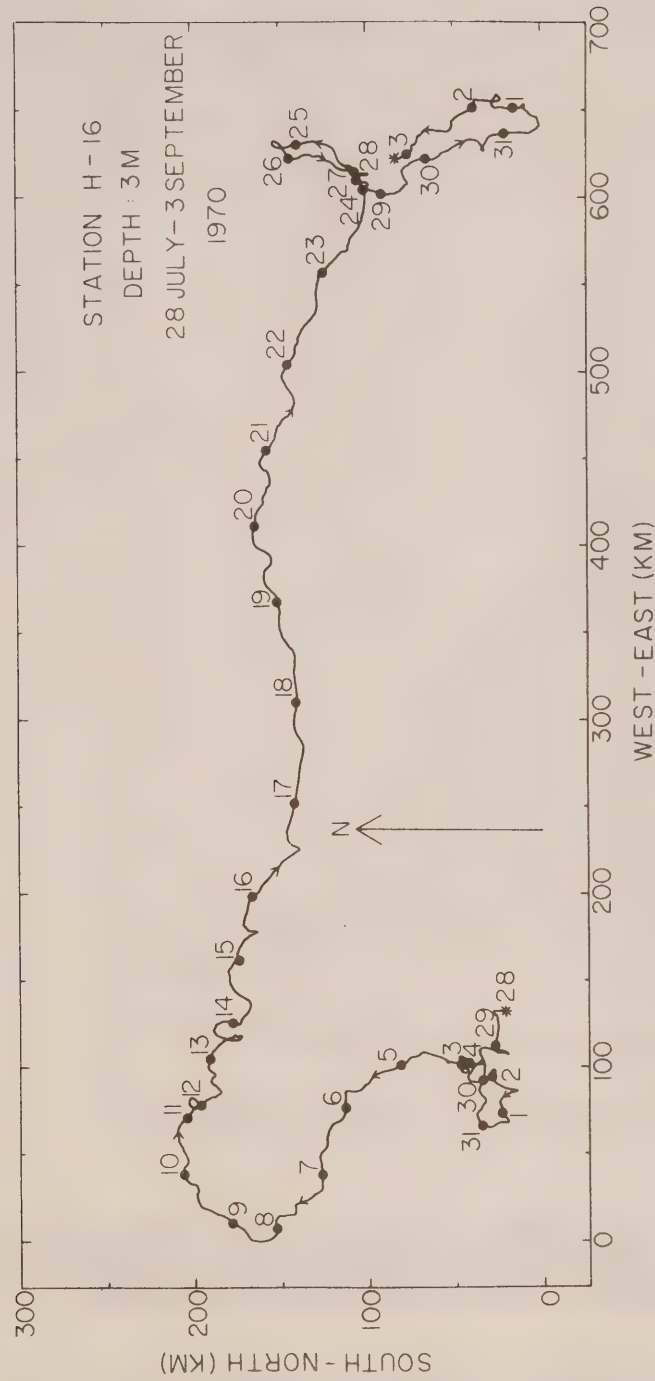


Fig. 6c.

A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 37-day period during July 28 through September 3, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9.25/16/ 4/69 TO 8. 5/15/ 5/69

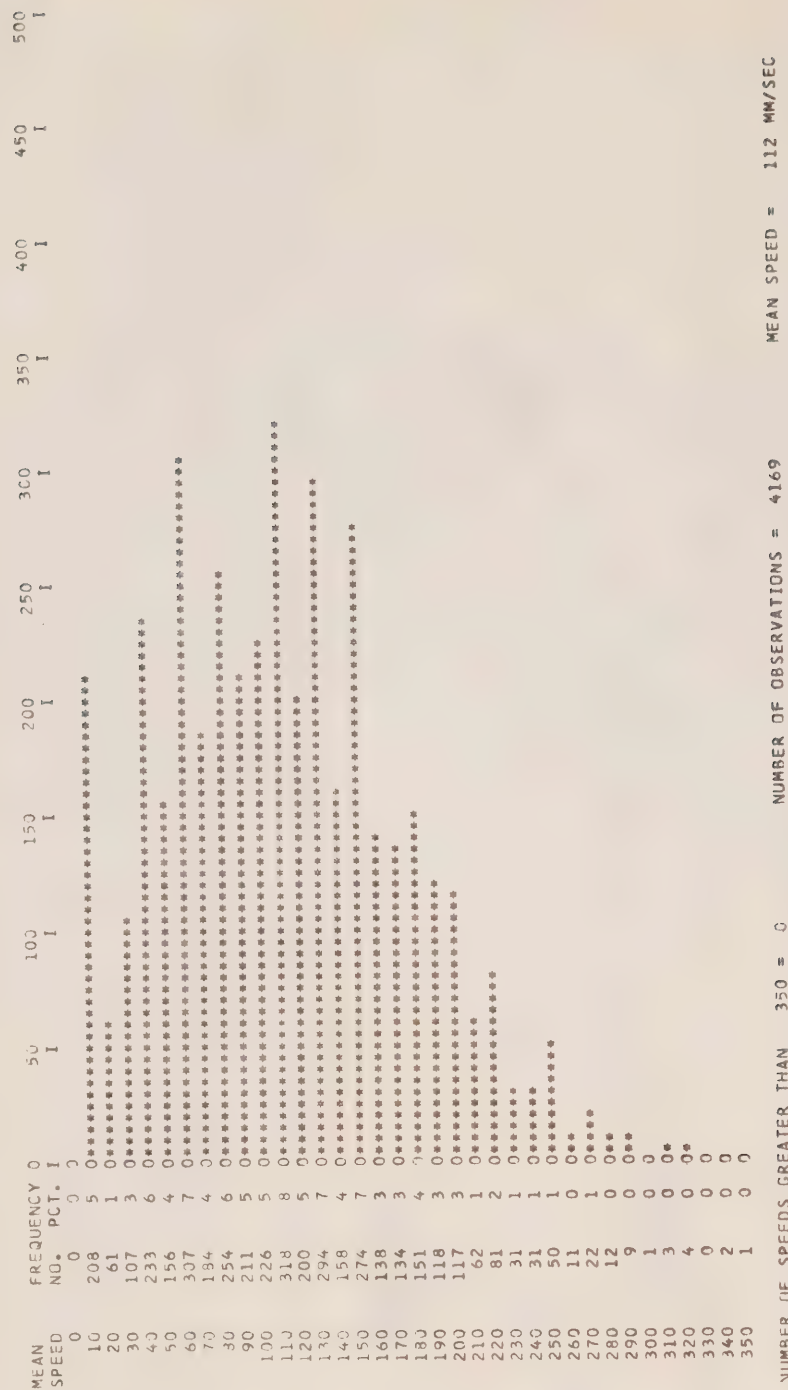


FIG. 7A.

A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9.25/16/ 4/69 TO 8. 5/15/ 5/69

MEAN DIR.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
0	63	2	0	*****									
5	106	3	0	*****									
10	130	3	0	*****									
15	118	3	0	*****									
20	218	5	0	*****									
25	176	4	0	*****									
30	169	4	0	*****									
35	132	3	0	*****									
40	120	3	0	*****									
45	153	4	0	*****									
50	137	3	0	*****									
55	119	3	0	*****									
60	123	3	0	*****									
65	132	3	0	*****									
70	100	2	0	*****									
75	93	2	0	*****									
80	95	2	0	*****									
85	90	2	0	*****									
90	104	2	0	*****									
95	111	3	0	*****									
100	89	2	0	*****									
105	96	2	0	*****									
110	124	3	0	*****									
115	95	2	0	*****									
120	148	4	0	*****									
125	128	3	0	*****									
130	141	3	0	*****									
135	147	4	0	*****									
140	105	3	0	*****									
145	95	2	0	*****									
150	66	2	0	*****									
155	56	1	0	*****									
160	47	1	0	*****									
165	37	1	0	*****									
170	29	1	0	*****									
175	20	0	0	*****									
180	17	0	0	*****									
185	11	0	0	*****									
190	10	0	0	*****									
195	10	0	0	*****									
200	8	0	0	*****									
205	8	0	0	*****									
210	5	0	0	*****									
215	5	0	0	*****									
220	4	0	0	*****									
225	4	0	0	*****									
230	10	0	0	*****									
235	11	0	0	*****									
240	4	0	0	*****									
245	6	0	0	*****									
250	4	0	0	*****									
255	0	0	0	*****									
260	3	0	0	*****									
265	3	0	0	*****									
270	4	0	0	*****									
275	2	0	0	*****									
280	3	0	0	*****									
285	1	0	0	*****									
290	4	0	0	*****									
295	3	0	0	*****									
300	4	0	0	*****									
305	7	0	0	*****									
310	4	0	0	*****									
315	6	0	0	*****									
320	6	0	0	*****									
325	8	0	0	*****									
330	8	0	0	*****									
335	3	0	0	*****									
340	12	0	0	*****									
345	7	0	0	*****									
350	21	1	0	*****									
355	31	1	0	*****									

NUMBER OF OBSERVATIONS = 4169

FIG. 7B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 9.25/16/ 4/69 TO 8. 5/15/ 5/69

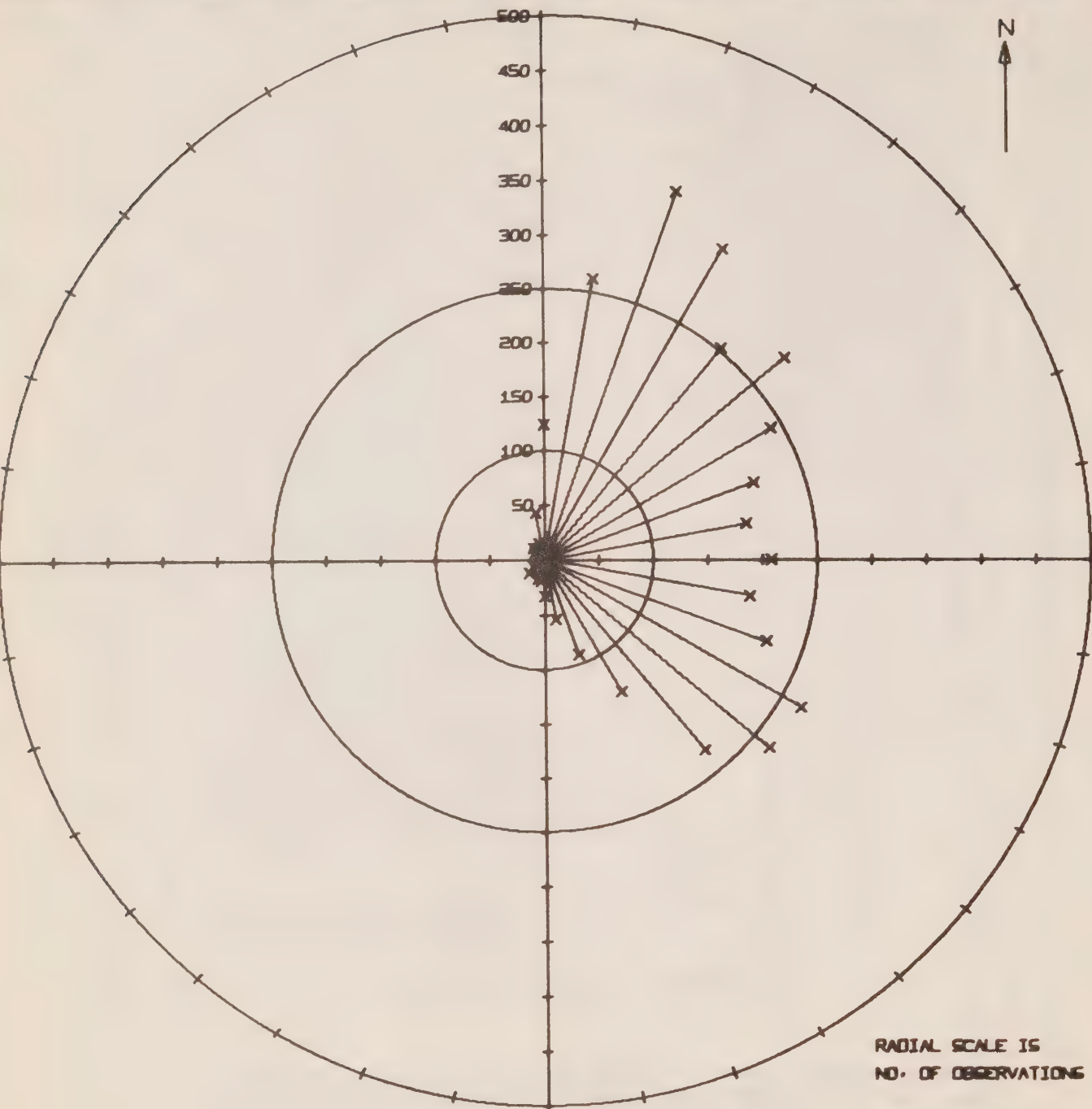
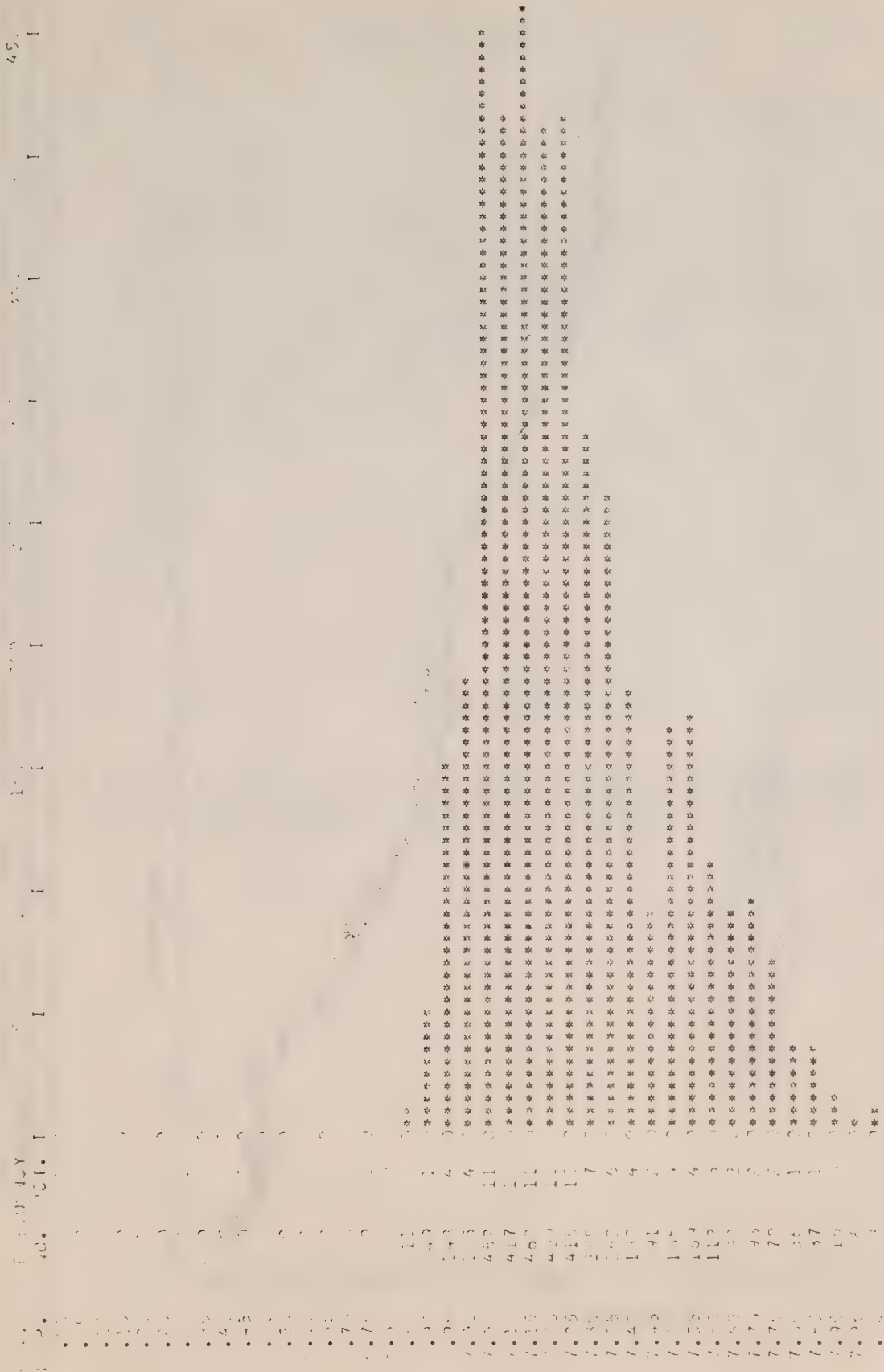


FIG. 7c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED
 AT 10-MINUTE INTERVALS OVER 20-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969



NUMBER OF OBSERVATIONS = 410
 MEAN TEMPERATURE = 12.26°C

G. 7b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 20-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969

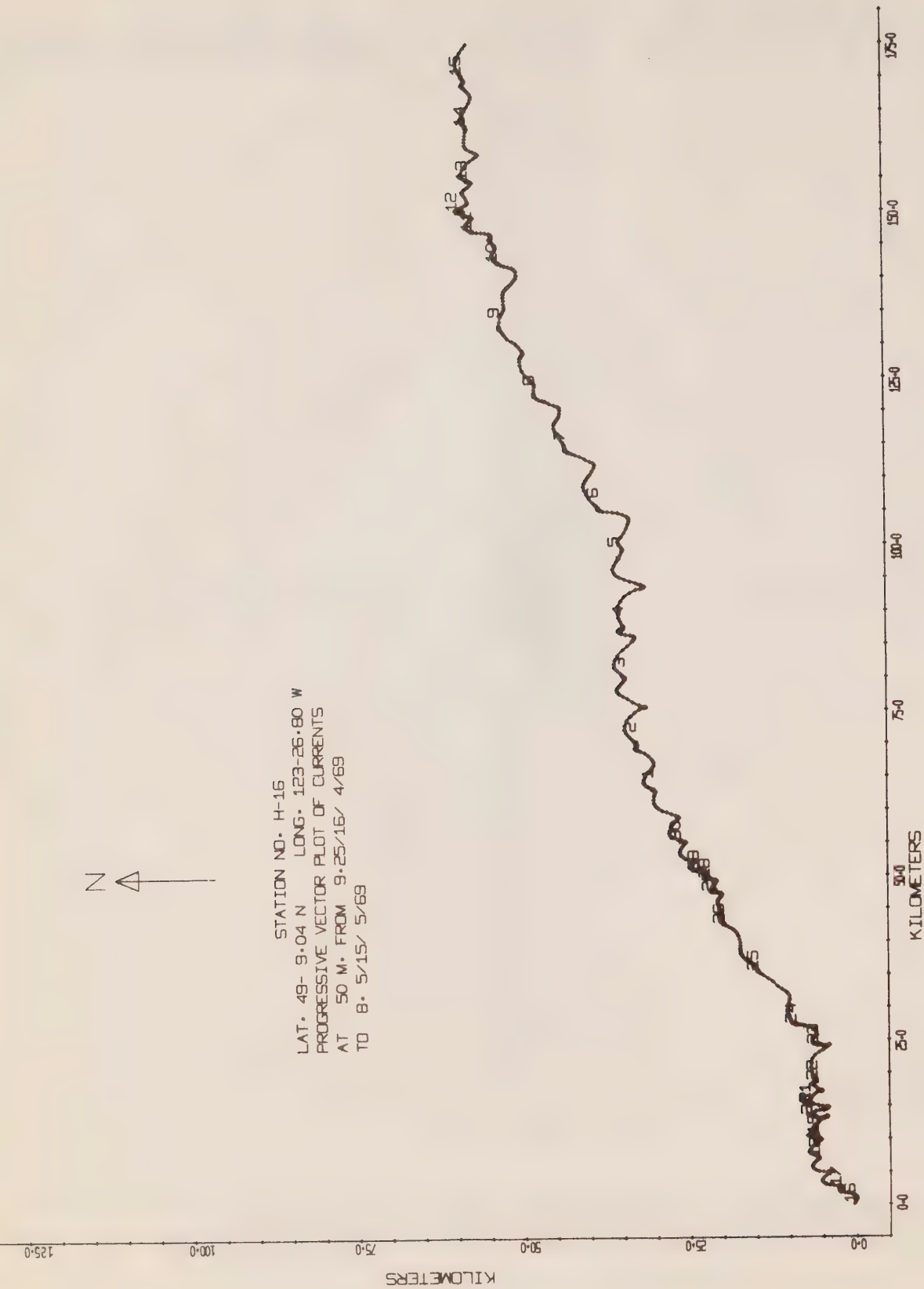
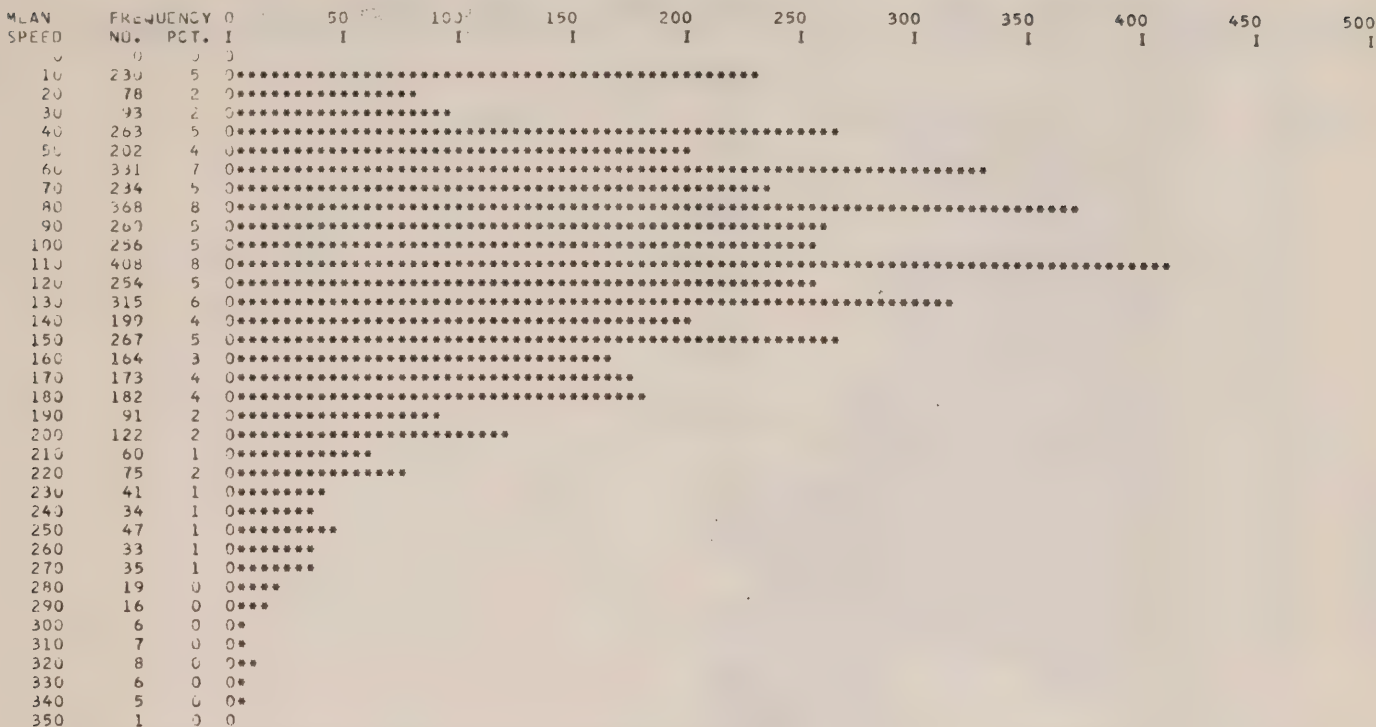


Fig. 7e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 29-day period during April 16 through May 15, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 10.35/15/ 5/69 TO 7.55/18/ 6/69

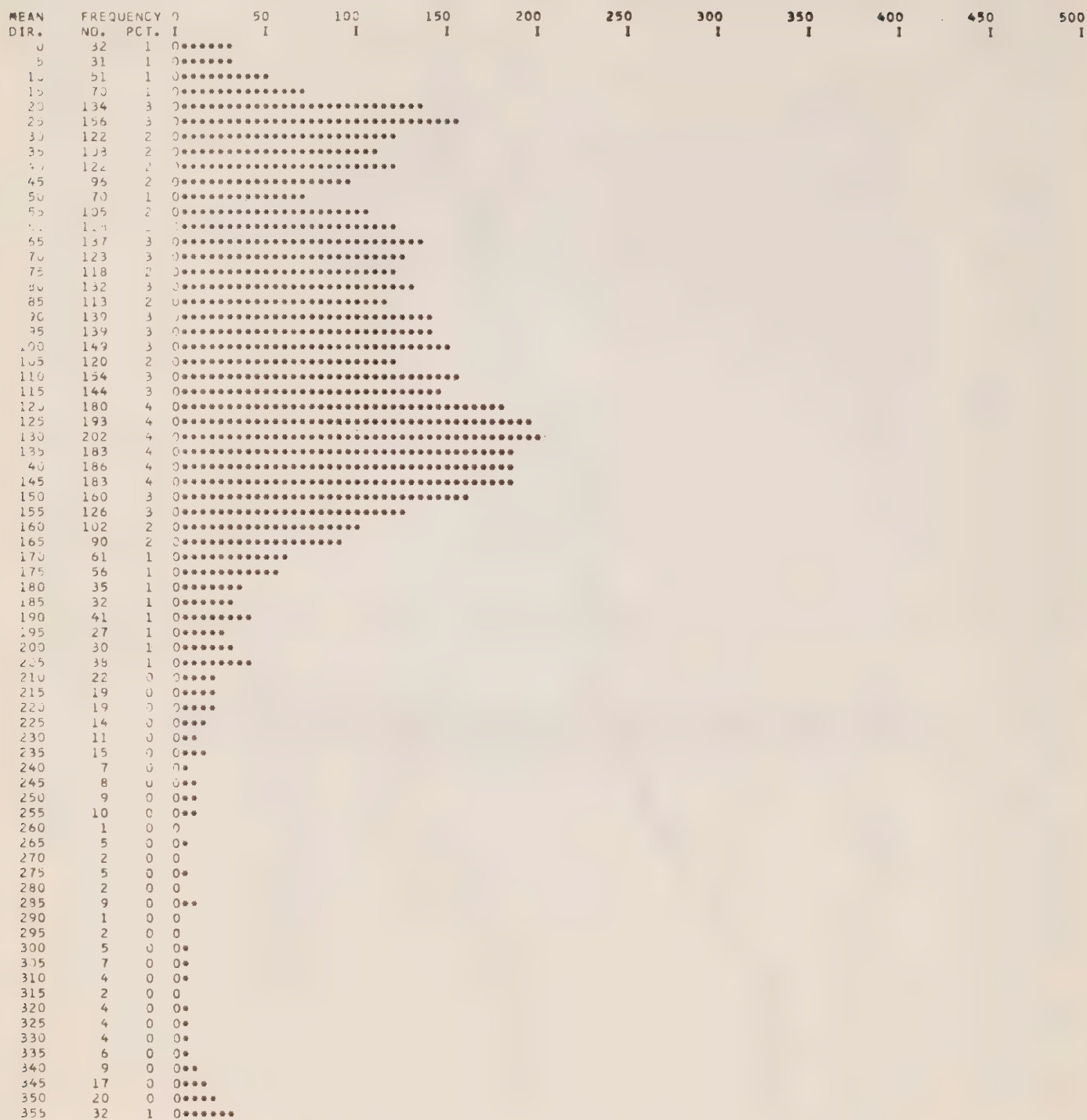


NUMBER OF SPEEDS GREATER THAN: 350 = 0 NUMBER OF OBSERVATIONS = 4883 MEAN SPEED = 113 MM/SEC

FIG. 8A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 10.35/15/ 5/69 TO 7.55/18/ 6/69



NUMBER OF OBSERVATIONS = 4883

FIG. 8B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 10.35/15/ 5/69 TO 7.55/18/ 6/69

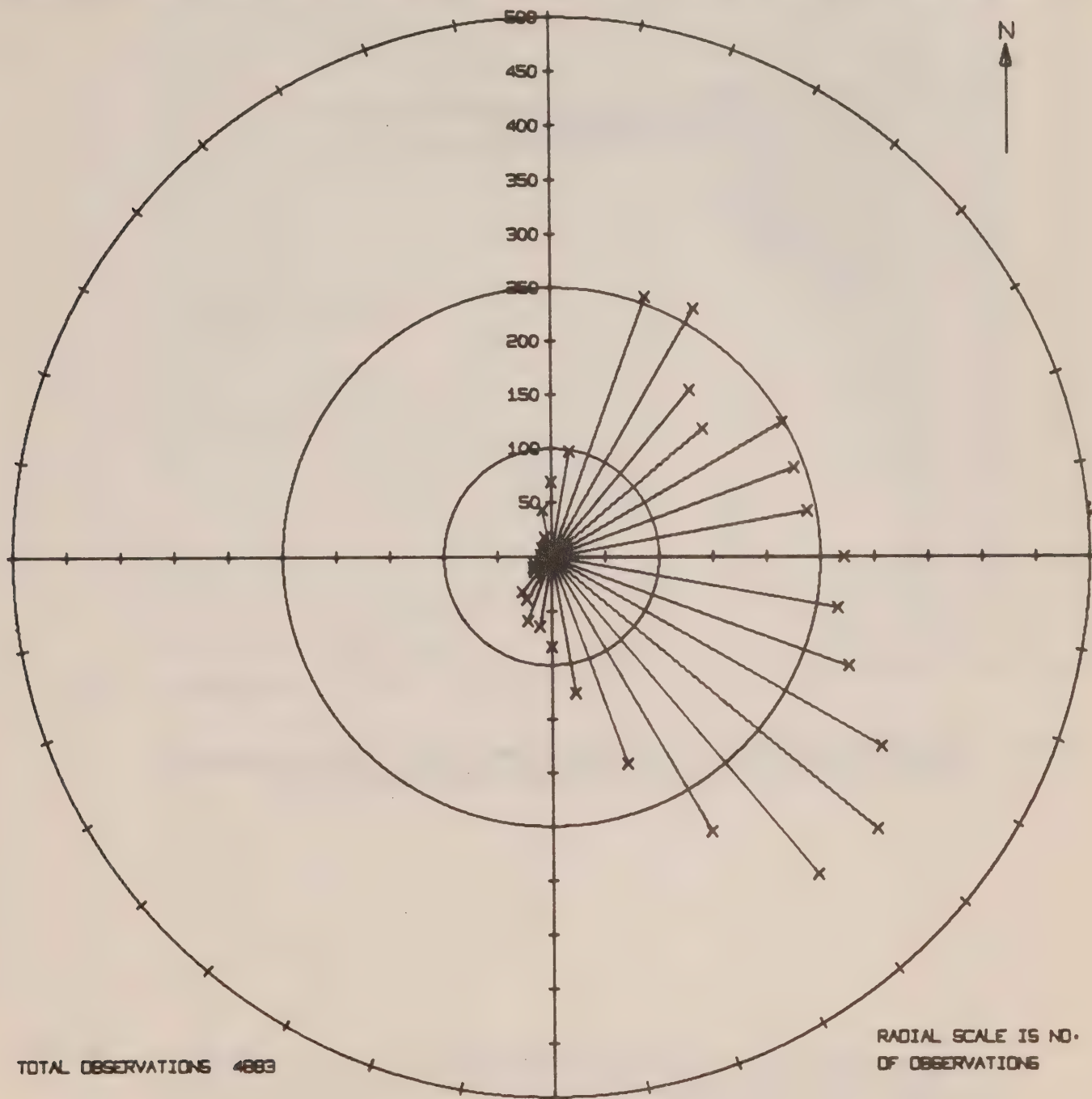
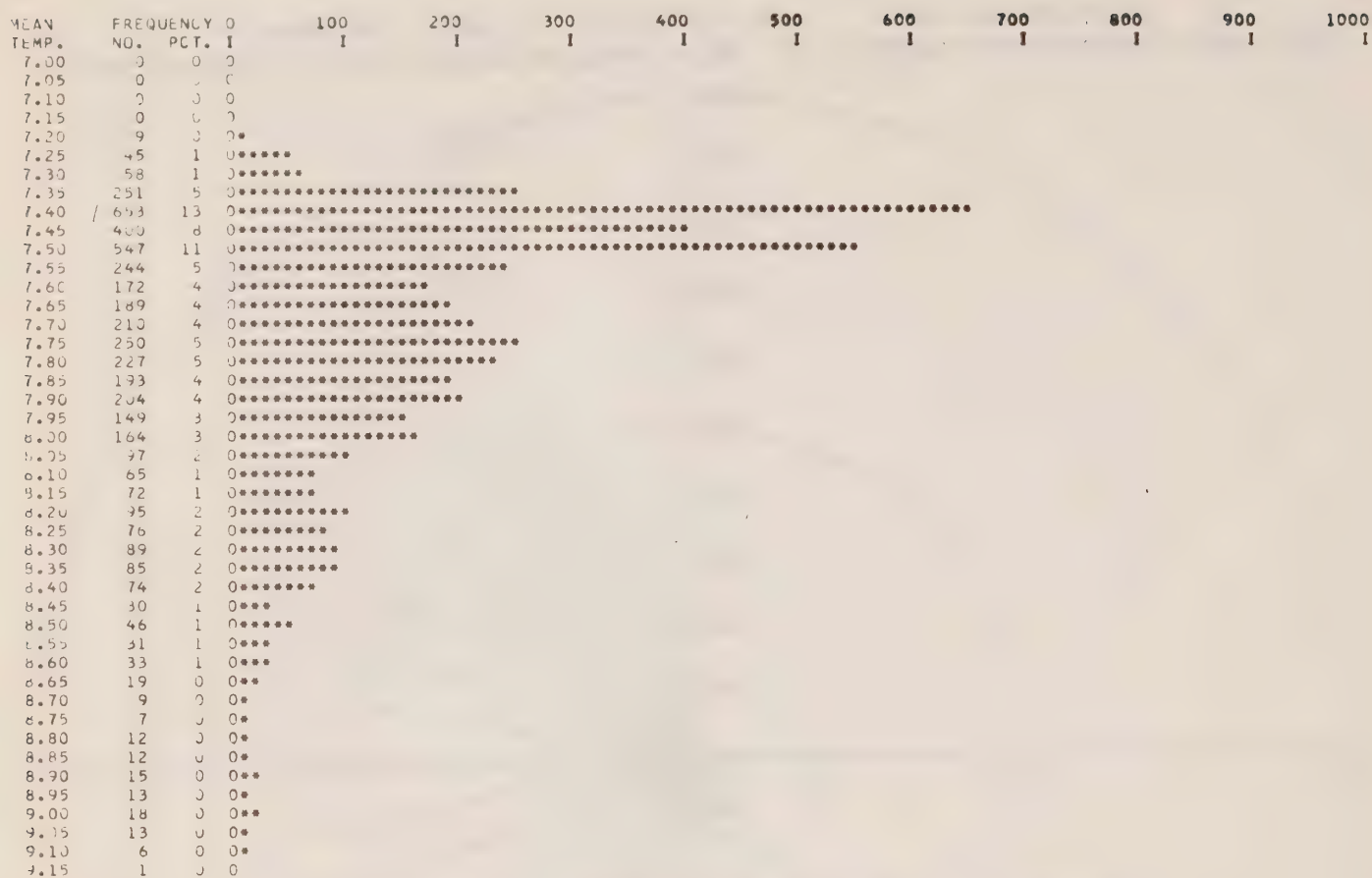


FIG. 8c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 10.35/15/ 5/69 TO 7.55/18/ 6/69



NUMBER OF TEMP. GREATER THAN 9.15 = 0 NUMBER OF OBSERVATIONS = 4883 MEAN TEMP = 7.74 DEG. C.

FIG. 8b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969.

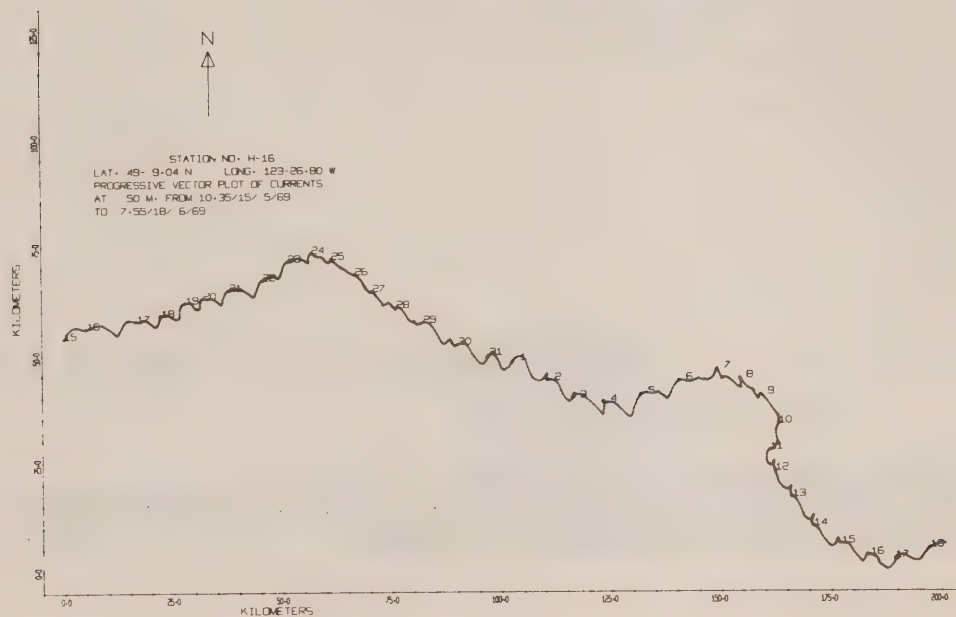


Fig. 8e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 34-day period during May 15 through June 18, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 10.55/18/ 6/69 TO 10. 5/10/ 7/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	16	5	0	.....								
20	91	3	0	.....								
30	97	3	0	.....								
40	246	8	0	.....								
50	168	5	0	.....								
60	275	9	0	.....								
70	174	6	0	.....								
80	264	8	0	.....								
90	16	0	0	.....								
100	157	5	0	.....								
110	251	8	0	.....								
120	116	4	0	.....								
130	102	3	0	.....								
140	81	3	0	.....								
150	155	5	0	.....								
160	96	3	0	.....								
170	76	2	0	.....								
180	98	3	0	.....								
190	60	2	0	.....								
200	74	2	0	.....								
210	38	1	0	.....								
220	49	2	0	.....								
230	33	1	0	.....								
240	16	1	0	***									
250	15	0	0	***									
260	17	1	0	***									
270	11	0	0	**									
280	7	0	0	*									
290	1	0	0										

NUMBER OF SPEEDS GREATER THAN 290 = 0

NUMBER OF OBSERVATIONS = 3165

MEAN SPEED = 101 MM/SEC

FIG. 9A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.34 N LONG. 123-26.80 W

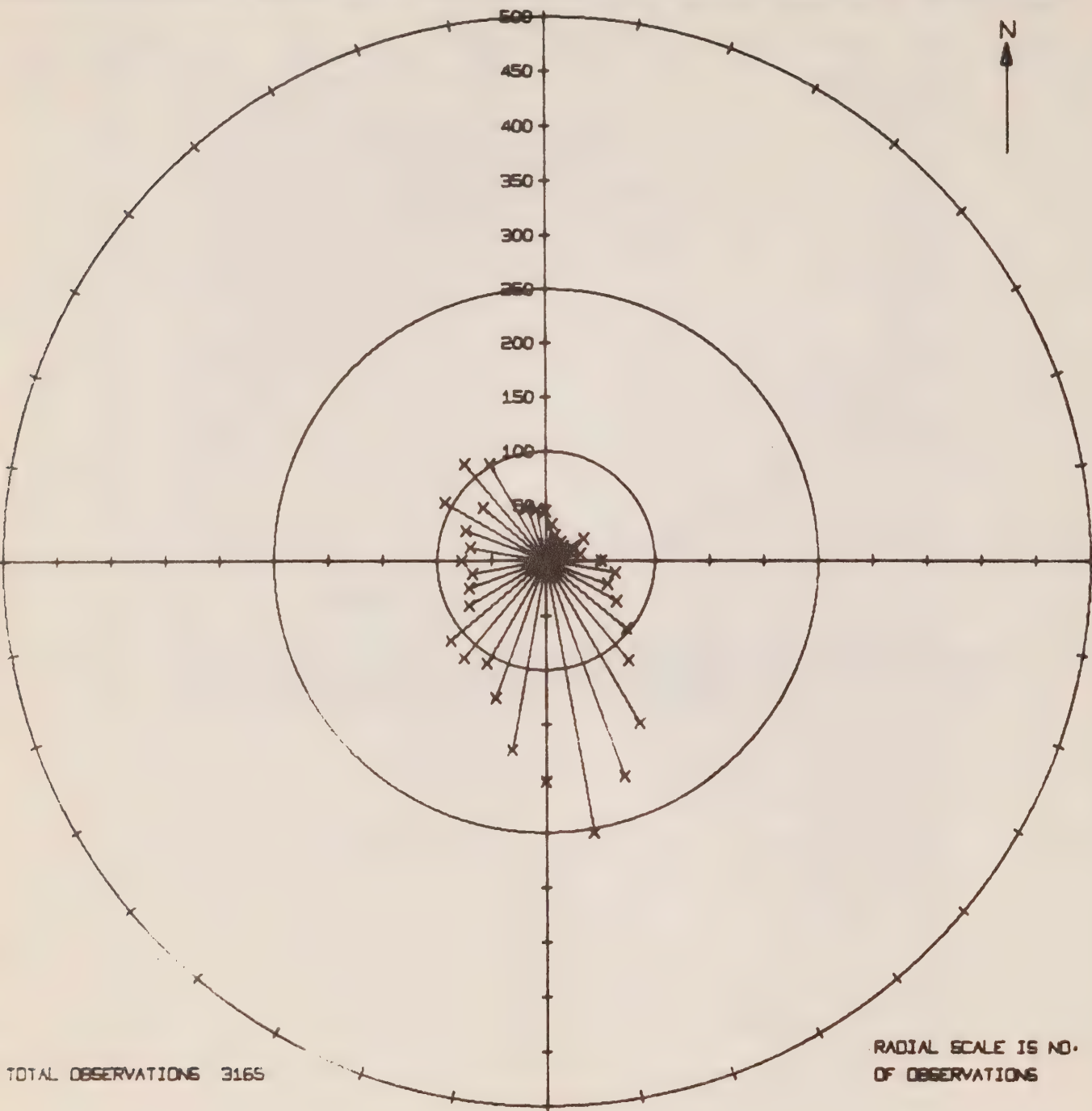
HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 10.55/18/ 6/69 TO 10. 5/10/ 7/69

MEAN DIR.	FREQUENCY NO.	PCT.	1	20	40	60	80	100	120	140	160	180	200
0	27	1	0	0	0	0	0	0	0	0	0	0	0
5	23	1	0	0	0	0	0	0	0	0	0	0	0
10	14	0	0	0	0	0	0	0	0	0	0	0	0
15	16	1	0	0	0	0	0	0	0	0	0	0	0
20	9	0	0	0	0	0	0	0	0	0	0	0	0
25	11	0	0	0	0	0	0	0	0	0	0	0	0
30	7	0	0	0	0	0	0	0	0	0	0	0	0
35	13	0	0	0	0	0	0	0	0	0	0	0	0
40	15	0	0	0	0	0	0	0	0	0	0	0	0
45	9	0	0	0	0	0	0	0	0	0	0	0	0
50	10	0	0	0	0	0	0	0	0	0	0	0	0
55	12	0	0	0	0	0	0	0	0	0	0	0	0
60	20	1	0	0	0	0	0	0	0	0	0	0	0
65	18	1	0	0	0	0	0	0	0	0	0	0	0
70	16	1	0	0	0	0	0	0	0	0	0	0	0
75	13	0	0	0	0	0	0	0	0	0	0	0	0
80	14	0	0	0	0	0	0	0	0	0	0	0	0
85	20	1	0	0	0	0	0	0	0	0	0	0	0
90	24	1	0	0	0	0	0	0	0	0	0	0	0
95	37	1	0	0	0	0	0	0	0	0	0	0	0
100	39	1	0	0	0	0	0	0	0	0	0	0	0
105	26	1	0	0	0	0	0	0	0	0	0	0	0
110	34	1	0	0	0	0	0	0	0	0	0	0	0
115	29	1	0	0	0	0	0	0	0	0	0	0	0
120	43	1	0	0	0	0	0	0	0	0	0	0	0
125	41	1	0	0	0	0	0	0	0	0	0	0	0
130	42	1	0	0	0	0	0	0	0	0	0	0	0
135	51	2	0	0	0	0	0	0	0	0	0	0	0
140	63	2	0	0	0	0	0	0	0	0	0	0	0
145	79	2	0	0	0	0	0	0	0	0	0	0	0
150	77	2	0	0	0	0	0	0	0	0	0	0	0
155	69	3	0	0	0	0	0	0	0	0	0	0	0
160	102	3	0	0	0	0	0	0	0	0	0	0	0
165	135	4	0	0	0	0	0	0	0	0	0	0	0
170	134	4	0	0	0	0	0	0	0	0	0	0	0
175	109	3	0	0	0	0	0	0	0	0	0	0	0
180	93	3	0	0	0	0	0	0	0	0	0	0	0
185	91	3	0	0	0	0	0	0	0	0	0	0	0
190	104	3	0	0	0	0	0	0	0	0	0	0	0
195	77	2	0	0	0	0	0	0	0	0	0	0	0
200	54	2	0	0	0	0	0	0	0	0	0	0	0
205	61	2	0	0	0	0	0	0	0	0	0	0	0
210	56	2	0	0	0	0	0	0	0	0	0	0	0
215	59	2	0	0	0	0	0	0	0	0	0	0	0
220	57	2	0	0	0	0	0	0	0	0	0	0	0
225	62	2	0	0	0	0	0	0	0	0	0	0	0
230	60	2	0	0	0	0	0	0	0	0	0	0	0
235	51	2	0	0	0	0	0	0	0	0	0	0	0
240	32	1	0	0	0	0	0	0	0	0	0	0	0
245	43	1	0	0	0	0	0	0	0	0	0	0	0
250	36	1	0	0	0	0	0	0	0	0	0	0	0
255	32	1	0	0	0	0	0	0	0	0	0	0	0
260	39	1	0	0	0	0	0	0	0	0	0	0	0
265	38	1	0	0	0	0	0	0	0	0	0	0	0
270	37	1	0	0	0	0	0	0	0	0	0	0	0
275	37	1	0	0	0	0	0	0	0	0	0	0	0
280	30	1	0	0	0	0	0	0	0	0	0	0	0
285	36	1	0	0	0	0	0	0	0	0	0	0	0
290	41	1	0	0	0	0	0	0	0	0	0	0	0
295	46	1	0	0	0	0	0	0	0	0	0	0	0
300	49	2	0	0	0	0	0	0	0	0	0	0	0
305	50	2	0	0	0	0	0	0	0	0	0	0	0
310	40	1	0	0	0	0	0	0	0	0	0	0	0
315	41	1	0	0	0	0	0	0	0	0	0	0	0
320	63	2	0	0	0	0	0	0	0	0	0	0	0
325	63	2	0	0	0	0	0	0	0	0	0	0	0
330	50	2	0	0	0	0	0	0	0	0	0	0	0
335	36	1	0	0	0	0	0	0	0	0	0	0	0
340	27	1	0	0	0	0	0	0	0	0	0	0	0
345	18	1	0	0	0	0	0	0	0	0	0	0	0
350	19	1	0	0	0	0	0	0	0	0	0	0	0
355	24	1	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 3165

FIG. 9B A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 10.55/18/ 6/69 TO 10. 5/10/ 7/69



©

FIG. 9c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

STATION NO. H-16 LAT. 49- 9.34 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 10.55/18/ 6/69 TO 10. 5/10/ 7/69

MEAN TEMP.	FREQUENCY NO.	PERCENT PCT.	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I
9.00	2	0										
9.05	3	0										
9.10	4	0										
9.15	2	0										
9.20	15	0										
9.25	19	1										
9.30	70	2										
9.35	112	3										
9.40	253	8										
9.45	164	5										
9.50	248	8										
9.55	238	8										
9.60	173	5										
9.65	207	7										
9.70	236	7										
9.75	35	1										
9.80	119	4										
9.85	125	4										
9.90	80	3										
9.95	55	2										
10.00	56	2										
10. 5	42	1										
10.10	65	2										
10.15	68	2										
10.20	64	2										
10.25	60	2										
10.30	40	2										
10.35	50	2										
10.40	22	1										
10.45	66	2										
10.50	80	3										
10.55	40	1										
10.60	66	2										
10.65	55	2										
10.70	46	2										
10.75	55	2										
10.80	19	1										
10.85	7	0										
10.90	3	0										

NUMBER OF TEMP. GREATER THAN 9.90 = 0

NUMBER OF OBSERVATIONS = 3165

MEAN TEMP = 8.83 DEG. C.

FIG. 9d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

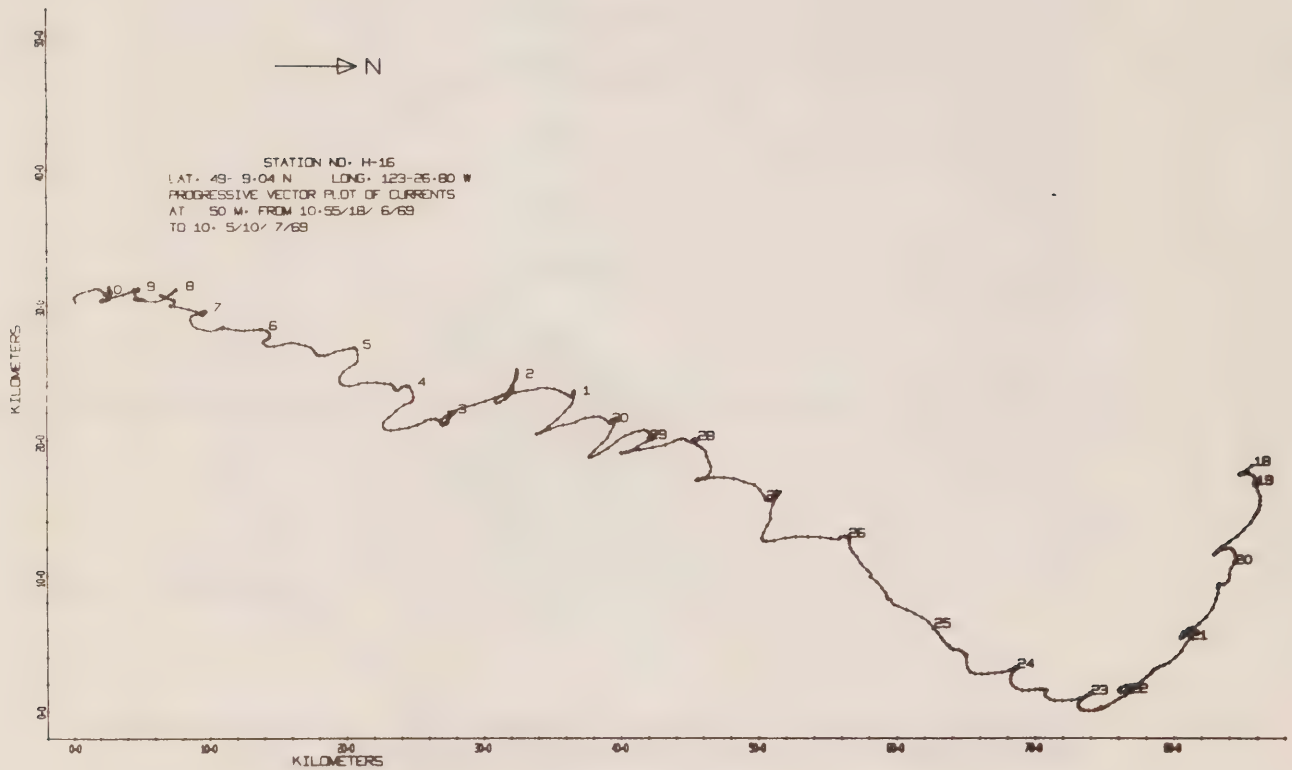


Fig. 9e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 22-day period during June 18 through July 10, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.74 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14. 5/10/ 7/69 TO 13.11/28/ 8/69

WIND SPEED	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
10	433	6	*****									
20	186	3	*****									
30	229	3	*****									
40	553	8	*****									
50	436	6	*****									
60	678	10	*****									
70	443	6	*****									
80	595	9	*****									
90	375	6	*****									
100	354	5	*****									
110	507	7	*****									
120	279	4	*****									
130	342	5	*****									
140	229	3	*****									
150	306	4	*****									
160	177	3	*****									
170	158	2	*****									
180	194	3	*****									
190	83	1	*****									
200	122	2	*****									
210	72	1	*****									
220	80	1	*****									
230	50	1	*****									
240	31	0	*****									
250	30	1	*****									
260	20	0	*****									
270	26	0	*****									
280	11	0	*****									
290	14	0	*****									
300	2	0	*****									
310	2	0	*****									
320	2	0	*****									
330	1	0	*****									

NUMBER OF SPEEDS GREATER THAN 330 = 0

NUMBER OF OBSERVATIONS = 7060

MEAN SPEED = 96 MM/SEC

FIG. 10A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 13. 5/10/ 7/69 TO 13.11/28/ 8/69

MEAN DIR.	FREQUENCY NO.	PCT.	0	5	10	150	200	250	300	350	400	450	500
0	99	1	0	0	0	0	0	0	0	0	0	0	0
5	77	1	0	0	0	0	0	0	0	0	0	0	0
10	57	1	0	0	0	0	0	0	0	0	0	0	0
15	65	1	0	0	0	0	0	0	0	0	0	0	0
20	123	2	0	0	0	0	0	0	0	0	0	0	0
25	100	1	0	0	0	0	0	0	0	0	0	0	0
30	76	1	0	0	0	0	0	0	0	0	0	0	0
35	67	1	0	0	0	0	0	0	0	0	0	0	0
40	79	1	0	0	0	0	0	0	0	0	0	0	0
45	85	1	0	0	0	0	0	0	0	0	0	0	0
50	86	1	0	0	0	0	0	0	0	0	0	0	0
55	93	1	0	0	0	0	0	0	0	0	0	0	0
60	101	1	0	0	0	0	0	0	0	0	0	0	0
65	78	1	0	0	0	0	0	0	0	0	0	0	0
70	118	2	0	0	0	0	0	0	0	0	0	0	0
75	117	2	0	0	0	0	0	0	0	0	0	0	0
80	114	2	0	0	0	0	0	0	0	0	0	0	0
85	90	1	0	0	0	0	0	0	0	0	0	0	0
90	113	2	0	0	0	0	0	0	0	0	0	0	0
95	109	2	0	0	0	0	0	0	0	0	0	0	0
100	103	1	0	0	0	0	0	0	0	0	0	0	0
105	95	1	0	0	0	0	0	0	0	0	0	0	0
110	93	1	0	0	0	0	0	0	0	0	0	0	0
115	11	1	0	0	0	0	0	0	0	0	0	0	0
120	159	2	0	0	0	0	0	0	0	0	0	0	0
125	154	2	0	0	0	0	0	0	0	0	0	0	0
130	160	2	0	0	0	0	0	0	0	0	0	0	0
135	217	3	0	0	0	0	0	0	0	0	0	0	0
140	213	3	0	0	0	0	0	0	0	0	0	0	0
145	273	4	0	0	0	0	0	0	0	0	0	0	0
150	134	2	0	0	0	0	0	0	0	0	0	0	0
155	235	3	0	0	0	0	0	0	0	0	0	0	0
160	205	3	0	0	0	0	0	0	0	0	0	0	0
165	201	3	0	0	0	0	0	0	0	0	0	0	0
170	190	3	0	0	0	0	0	0	0	0	0	0	0
175	159	2	0	0	0	0	0	0	0	0	0	0	0
180	160	2	0	0	0	0	0	0	0	0	0	0	0
185	140	2	0	0	0	0	0	0	0	0	0	0	0
190	130	2	0	0	0	0	0	0	0	0	0	0	0
195	126	2	0	0	0	0	0	0	0	0	0	0	0
200	82	1	0	0	0	0	0	0	0	0	0	0	0
205	61	1	0	0	0	0	0	0	0	0	0	0	0
210	70	1	0	0	0	0	0	0	0	0	0	0	0
215	78	1	0	0	0	0	0	0	0	0	0	0	0
220	76	1	0	0	0	0	0	0	0	0	0	0	0
225	87	1	0	0	0	0	0	0	0	0	0	0	0
230	62	1	0	0	0	0	0	0	0	0	0	0	0
235	66	1	0	0	0	0	0	0	0	0	0	0	0
240	69	1	0	0	0	0	0	0	0	0	0	0	0
245	70	1	0	0	0	0	0	0	0	0	0	0	0
250	55	1	0	0	0	0	0	0	0	0	0	0	0
255	56	1	0	0	0	0	0	0	0	0	0	0	0
260	53	1	0	0	0	0	0	0	0	0	0	0	0
265	39	1	0	0	0	0	0	0	0	0	0	0	0
270	45	1	0	0	0	0	0	0	0	0	0	0	0
275	62	1	0	0	0	0	0	0	0	0	0	0	0
280	37	1	0	0	0	0	0	0	0	0	0	0	0
285	29	0	0	0	0	0	0	0	0	0	0	0	0
290	42	1	0	0	0	0	0	0	0	0	0	0	0
295	30	0	0	0	0	0	0	0	0	0	0	0	0
300	46	1	0	0	0	0	0	0	0	0	0	0	0
305	53	1	0	0	0	0	0	0	0	0	0	0	0
310	51	1	0	0	0	0	0	0	0	0	0	0	0
315	33	1	0	0	0	0	0	0	0	0	0	0	0
320	49	1	0	0	0	0	0	0	0	0	0	0	0
325	57	1	0	0	0	0	0	0	0	0	0	0	0
330	59	1	0	0	0	0	0	0	0	0	0	0	0
335	54	1	0	0	0	0	0	0	0	0	0	0	0
340	51	1	0	0	0	0	0	0	0	0	0	0	0
345	44	1	0	0	0	0	0	0	0	0	0	0	0
350	50	1	0	0	0	0	0	0	0	0	0	0	0
355	75	1	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 7060

FIG. 10B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 13. 5/10/ 7/69 TO 13.11/28/ 8/69

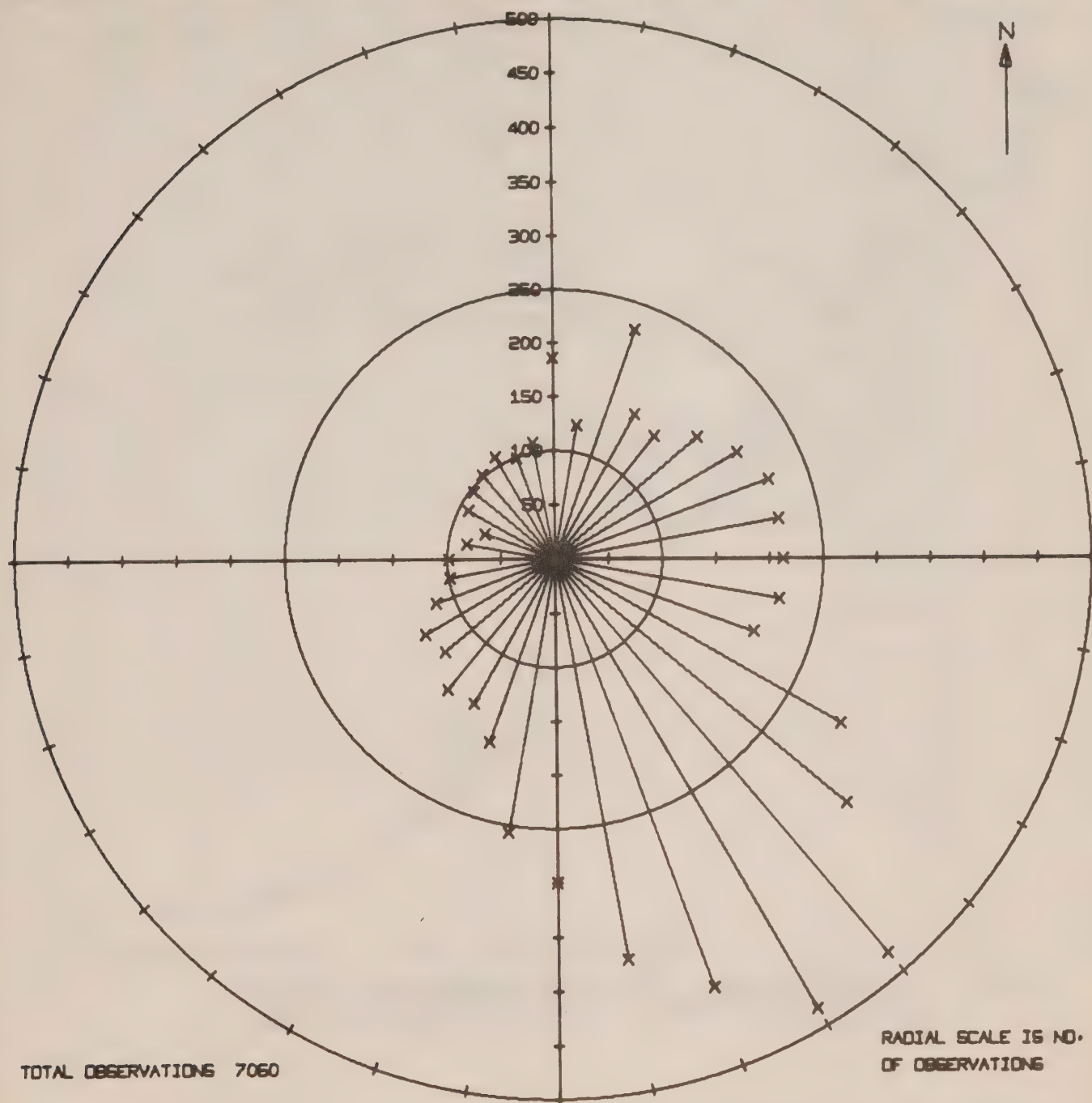
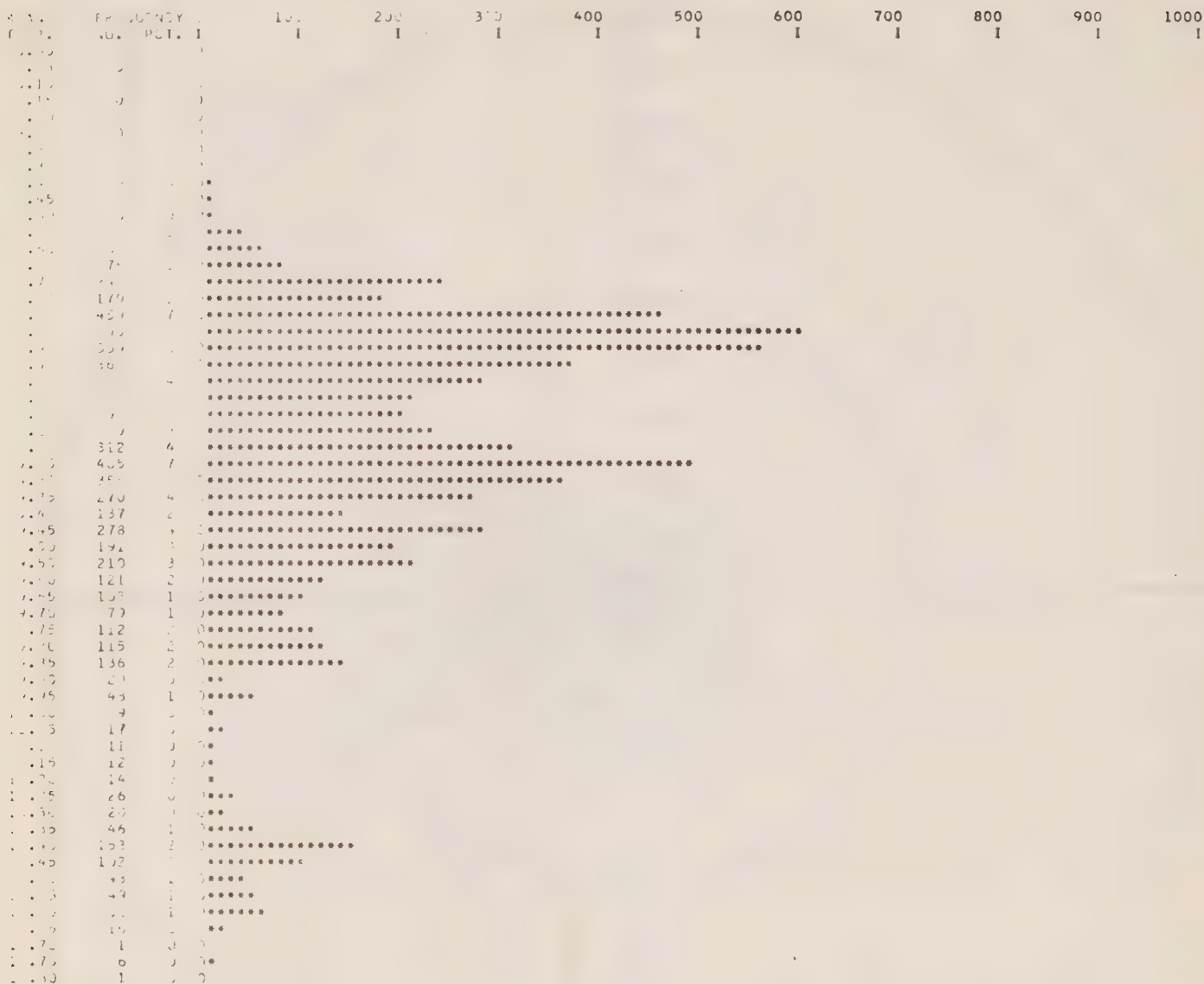


FIG. 10c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969.

STATION NO. H-16 LAT. 42- 9.24 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 13. 5/10/ 7/69 TO 13.11/28/ 8/69



NUMBER OF TEMP. GRATER THAN 10.30 = 1 NUMBER OF OBSERVATIONS = 7060 MEAN TEMP = 9.25 DEG. C.

FIG. 10b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 20-MINUTE INTERVALS OVER 49-DAY PERIOD DURING JULY 10 THROUGH AUGUST 28, 1969.

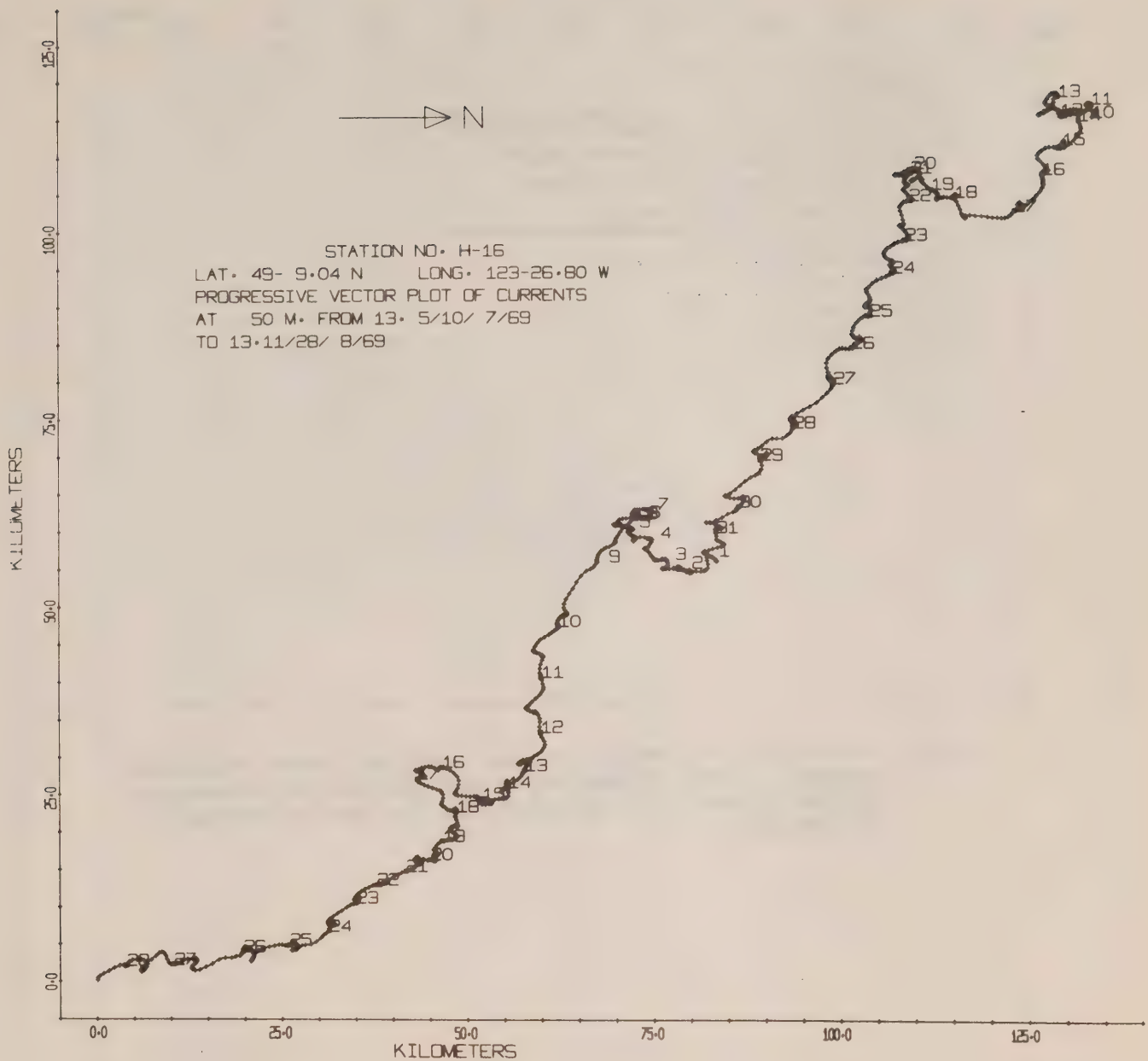
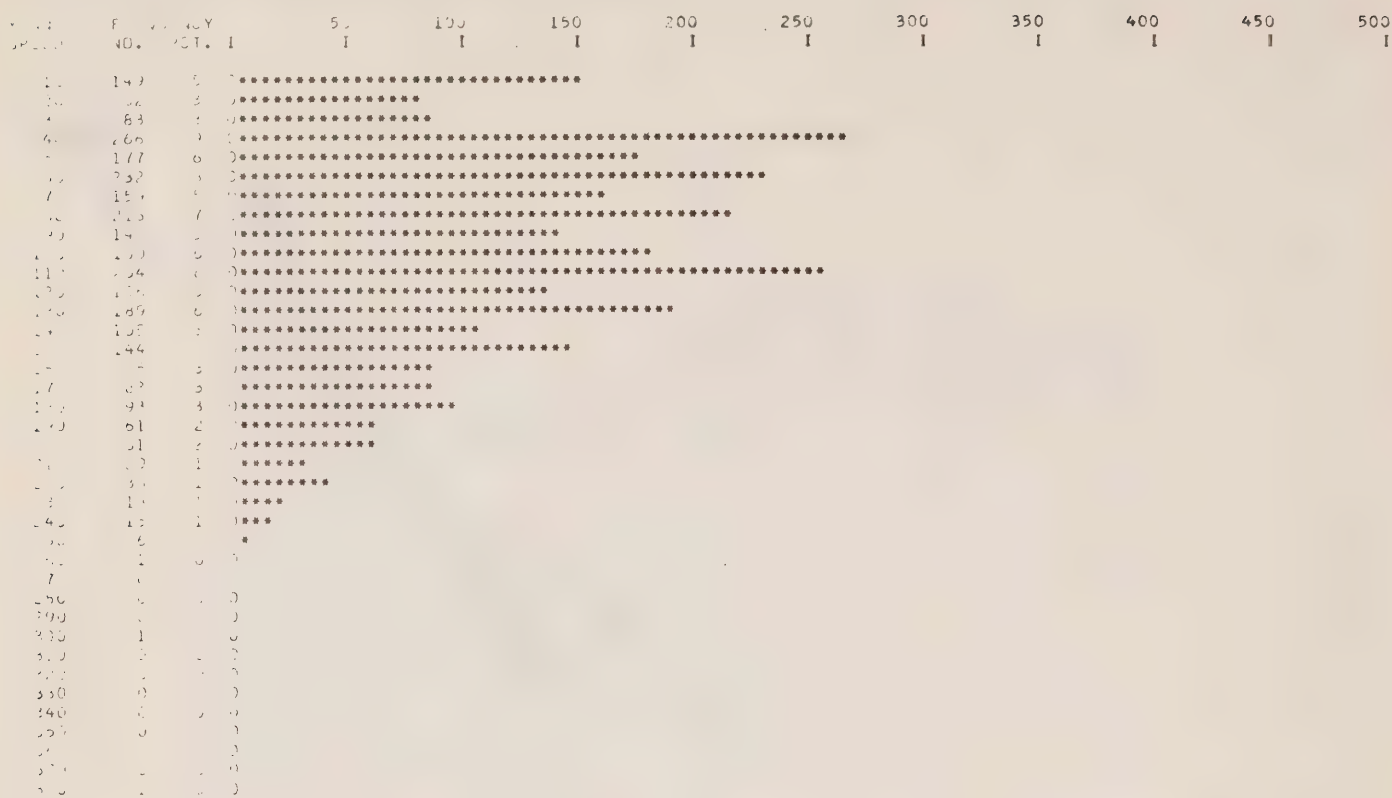


Fig. 10e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 49-day period during July 10 through August 28, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

FIG. 11a. LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 15.46/28/ 8/69 TO 11.57/18/ 9/69



NUMBER OF SPEEDS GREATER THAN 300 = 0

NUMBER OF OBSERVATIONS = 3004

MEAN SPEED = 98 MM/SEC

FIG. 11a. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 15.45/28/ 8/69 TO 11.57/18/ 9/69

MEAN DIR.	FREQUENCY NO.	PCT. I	20 I	40 I	60 I	80 I	100 I	120 I	140 I	160 I	180 I	200 I
5	60	2	0	0	0	0	0	0	0	0	0	0
10	55	2	0	0	0	0	0	0	0	0	0	0
15	53	2	0	0	0	0	0	0	0	0	0	0
20	86	3	0	0	0	0	0	0	0	0	0	0
25	94	3	0	0	0	0	0	0	0	0	0	0
30	69	2	0	0	0	0	0	0	0	0	0	0
35	79	3	0	0	0	0	0	0	0	0	0	0
40	36	2	0	0	0	0	0	0	0	0	0	0
45	33	2	0	0	0	0	0	0	0	0	0	0
50	47	2	0	0	0	0	0	0	0	0	0	0
55	51	2	0	0	0	0	0	0	0	0	0	0
60	45	1	0	0	0	0	0	0	0	0	0	0
65	43	1	0	0	0	0	0	0	0	0	0	0
70	49	1	0	0	0	0	0	0	0	0	0	0
75	46	2	0	0	0	0	0	0	0	0	0	0
80	55	2	0	0	0	0	0	0	0	0	0	0
85	49	2	0	0	0	0	0	0	0	0	0	0
90	56	2	0	0	0	0	0	0	0	0	0	0
95	42	1	0	0	0	0	0	0	0	0	0	0
100	47	2	0	0	0	0	0	0	0	0	0	0
105	59	2	0	0	0	0	0	0	0	0	0	0
110	62	2	0	0	0	0	0	0	0	0	0	0
115	84	3	0	0	0	0	0	0	0	0	0	0
120	81	3	0	0	0	0	0	0	0	0	0	0
125	67	2	0	0	0	0	0	0	0	0	0	0
130	56	2	0	0	0	0	0	0	0	0	0	0
135	113	4	0	0	0	0	0	0	0	0	0	0
140	119	4	0	0	0	0	0	0	0	0	0	0
145	109	4	0	0	0	0	0	0	0	0	0	0
150	109	4	0	0	0	0	0	0	0	0	0	0
155	93	3	0	0	0	0	0	0	0	0	0	0
160	63	2	0	0	0	0	0	0	0	0	0	0
165	53	2	0	0	0	0	0	0	0	0	0	0
170	43	1	0	0	0	0	0	0	0	0	0	0
175	47	2	0	0	0	0	0	0	0	0	0	0
180	29	1	0	0	0	0	0	0	0	0	0	0
185	21	1	0	0	0	0	0	0	0	0	0	0
190	21	1	0	0	0	0	0	0	0	0	0	0
195	14	0	0	0	0	0	0	0	0	0	0	0
200	22	1	0	0	0	0	0	0	0	0	0	0
205	9	0	0	0	0	0	0	0	0	0	0	0
210	22	1	0	0	0	0	0	0	0	0	0	0
215	10	0	0	0	0	0	0	0	0	0	0	0
220	12	0	0	0	0	0	0	0	0	0	0	0
225	5	0	0	0	0	0	0	0	0	0	0	0
230	11	0	0	0	0	0	0	0	0	0	0	0
235	8	0	0	0	0	0	0	0	0	0	0	0
240	9	0	0	0	0	0	0	0	0	0	0	0
245	9	0	0	0	0	0	0	0	0	0	0	0
250	17	1	0	0	0	0	0	0	0	0	0	0
255	8	0	0	0	0	0	0	0	0	0	0	0
260	15	1	0	0	0	0	0	0	0	0	0	0
265	15	1	0	0	0	0	0	0	0	0	0	0
270	11	0	0	0	0	0	0	0	0	0	0	0
275	11	0	0	0	0	0	0	0	0	0	0	0
280	16	1	0	0	0	0	0	0	0	0	0	0
285	12	0	0	0	0	0	0	0	0	0	0	0
290	17	1	0	0	0	0	0	0	0	0	0	0
295	15	1	0	0	0	0	0	0	0	0	0	0
300	9	0	0	0	0	0	0	0	0	0	0	0
305	20	1	0	0	0	0	0	0	0	0	0	0
310	17	1	0	0	0	0	0	0	0	0	0	0
315	16	1	0	0	0	0	0	0	0	0	0	0
320	19	1	0	0	0	0	0	0	0	0	0	0
325	18	1	0	0	0	0	0	0	0	0	0	0
330	24	1	0	0	0	0	0	0	0	0	0	0
335	30	1	0	0	0	0	0	0	0	0	0	0
340	29	1	0	0	0	0	0	0	0	0	0	0
345	25	1	0	0	0	0	0	0	0	0	0	0
350	49	2	0	0	0	0	0	0	0	0	0	0
355	49	2	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 3004

FIG. 11B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 15.46/28/ 8/69 TO 11.57/18/ 9/69

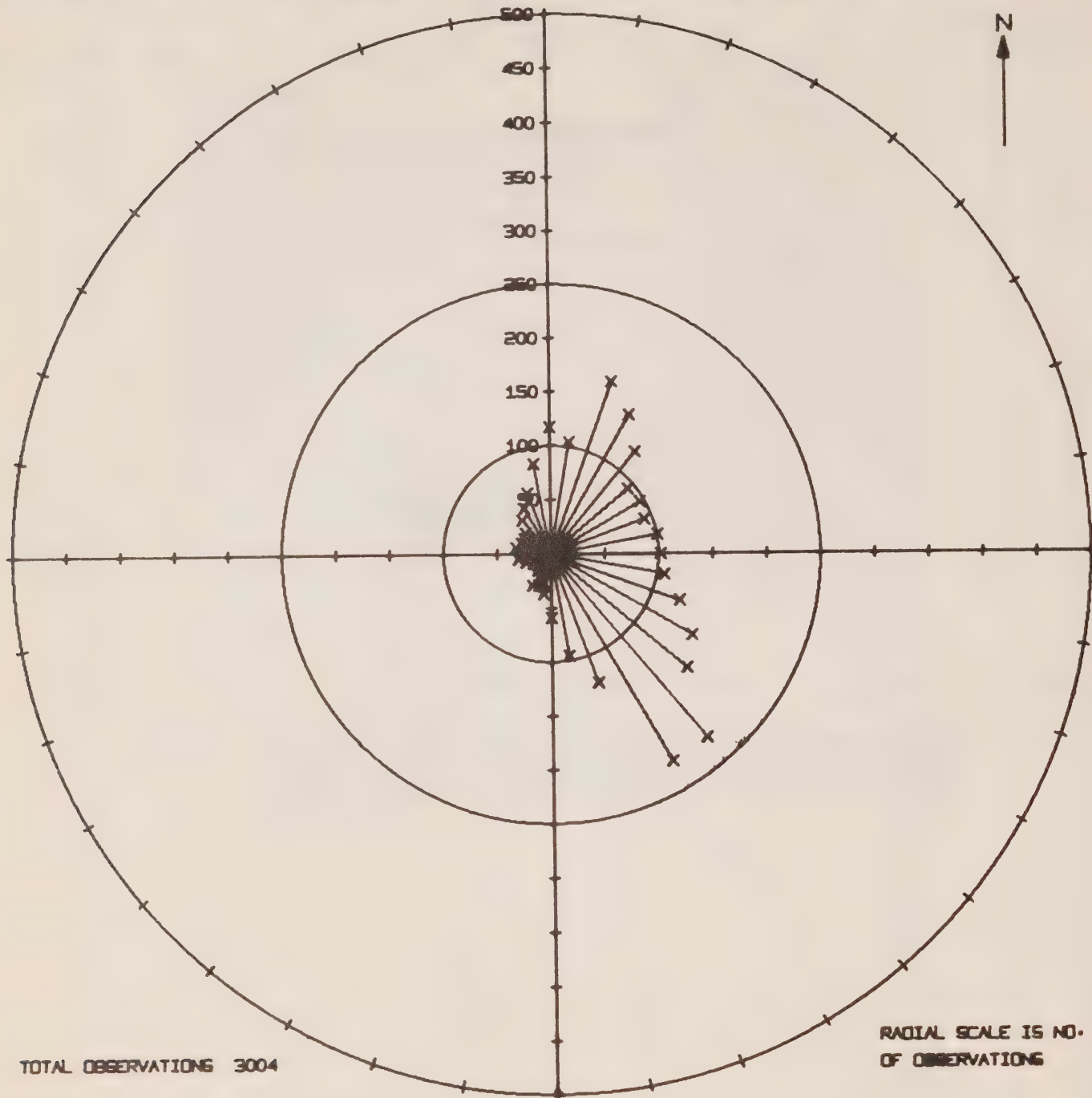


FIG. 11c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 15.46/28/ 8/69 TO 11.57/18/ 9/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
8.05	0	0										
8.10	0	0										
8.15	0	0										
8.20	0	0										
8.25	0	0										
8.30	0	0										
8.35	0	0										
8.40	0	0										
8.45	0	0										
8.50	0	0										
8.55	0	0										
8.60	0	0										
8.65	0	0										
8.70	0	0										
8.75	9	0	0**									
8.80	55	2	0*****									
8.85	70	2	0*****									
8.90	108	4	0*****									
8.95	274	9	0*****									
9.00	419	14	0*****									
9.05	235	8	0*****									
9.10	163	5	0*****									
9.15	141	5	0*****									
9.20	179	5	0*****									
9.25	131	4	0*****									
9.30	84	3	0*****									
9.35	114	4	0*****									
9.40	46	2	0*****									
9.45	169	6	0*****									
9.50	88	3	0*****									
9.55	148	5	0*****									
9.60	202	7	0*****									
9.65	213	7	0*****									
9.70	121	4	0*****									
9.75	20	1	0***									
9.80	6	0	0*									
9.85	6	0	0*									
9.90	0	0	0									
9.95	0	0	0									
10.00	0	0	0									
10.05	0	0	0									
10.10	0	0	0									
10.15	0	0	0									
10.20	0	0	0									
10.25	0	0	0									
10.30	0	0	0									
10.35	0	0	0									
10.40	0	0	0									
10.45	0	0	0									
10.50	0	0	0									
10.55	0	0	0									
10.60	0	0	0									
10.65	0	0	0									
10.70	0	0	0									
10.75	0	0	0									
10.80	0	0	0									
10.85	0	0	0									
10.90	0	0	0									
10.95	0	0	0									
11.00	0	0	0									

NUMBER OF TEMP. GREATER THAN 12.95 = 1

NUMBER OF OBSERVATIONS = 3004

MEAN TEMP = 9.24 DEG. C.

FIG. 11b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

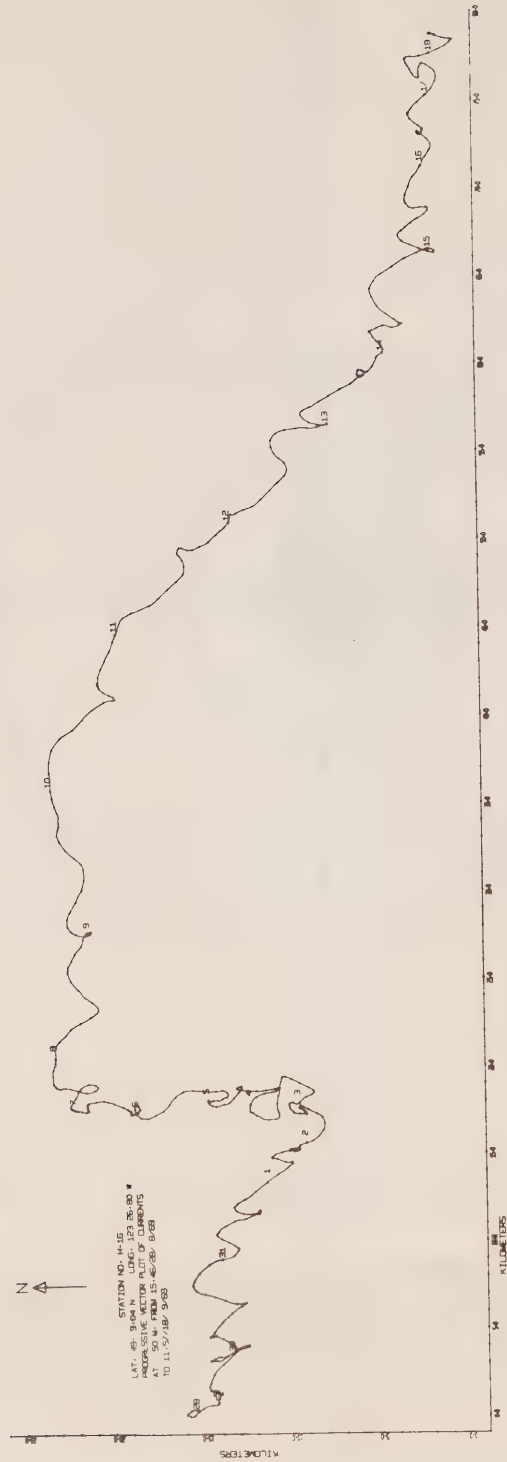


Fig. 11e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 21-day period during August 28 through September 18, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.34 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14.37/18/ 9/69 TO 8. 3/16/10/69

MEAN SPEED	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	142	4	0	0	0	0	0	0	0	0	0	0	0
20	44	1	0	0	0	0	0	0	0	0	0	0	0
30	79	2	0	0	0	0	0	0	0	0	0	0	0
40	169	4	0	0	0	0	0	0	0	0	0	0	0
50	136	3	0	0	0	0	0	0	0	0	0	0	0
60	207	5	0	0	0	0	0	0	0	0	0	0	0
70	125	3	0	0	0	0	0	0	0	0	0	0	0
80	202	5	0	0	0	0	0	0	0	0	0	0	0
90	103	4	0	0	0	0	0	0	0	0	0	0	0
100	103	5	0	0	0	0	0	0	0	0	0	0	0
110	288	7	0	0	0	0	0	0	0	0	0	0	0
120	103	5	0	0	0	0	0	0	0	0	0	0	0
130	253	6	0	0	0	0	0	0	0	0	0	0	0
140	199	5	0	0	0	0	0	0	0	0	0	0	0
150	287	7	0	0	0	0	0	0	0	0	0	0	0
160	177	4	0	0	0	0	0	0	0	0	0	0	0
170	105	4	0	0	0	0	0	0	0	0	0	0	0
180	221	6	0	0	0	0	0	0	0	0	0	0	0
190	131	3	0	0	0	0	0	0	0	0	0	0	0
200	160	4	0	0	0	0	0	0	0	0	0	0	0
210	97	2	0	0	0	0	0	0	0	0	0	0	0
220	111	3	0	0	0	0	0	0	0	0	0	0	0
230	54	1	0	0	0	0	0	0	0	0	0	0	0
240	51	1	0	0	0	0	0	0	0	0	0	0	0
250	55	1	0	0	0	0	0	0	0	0	0	0	0
260	26	1	0	0	0	0	0	0	0	0	0	0	0
270	35	1	0	0	0	0	0	0	0	0	0	0	0
280	16	0	0	0	0	0	0	0	0	0	0	0	0
290	11	0	0	0	0	0	0	0	0	0	0	0	0
300	3	0	0	0	0	0	0	0	0	0	0	0	0
310	4	0	0	0	0	0	0	0	0	0	0	0	0
320	5	0	0	0	0	0	0	0	0	0	0	0	0
330	7	0	0	0	0	0	0	0	0	0	0	0	0
340	3	0	0	0	0	0	0	0	0	0	0	0	0
350	1	0	0	0	0	0	0	0	0	0	0	0	0
360	5	0	0	0	0	0	0	0	0	0	0	0	0
370	1	0	0	0	0	0	0	0	0	0	0	0	0
380	1	0	0	0	0	0	0	0	0	0	0	0	0
390	2	0	0	0	0	0	0	0	0	0	0	0	0
400	2	0	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 400 = 0

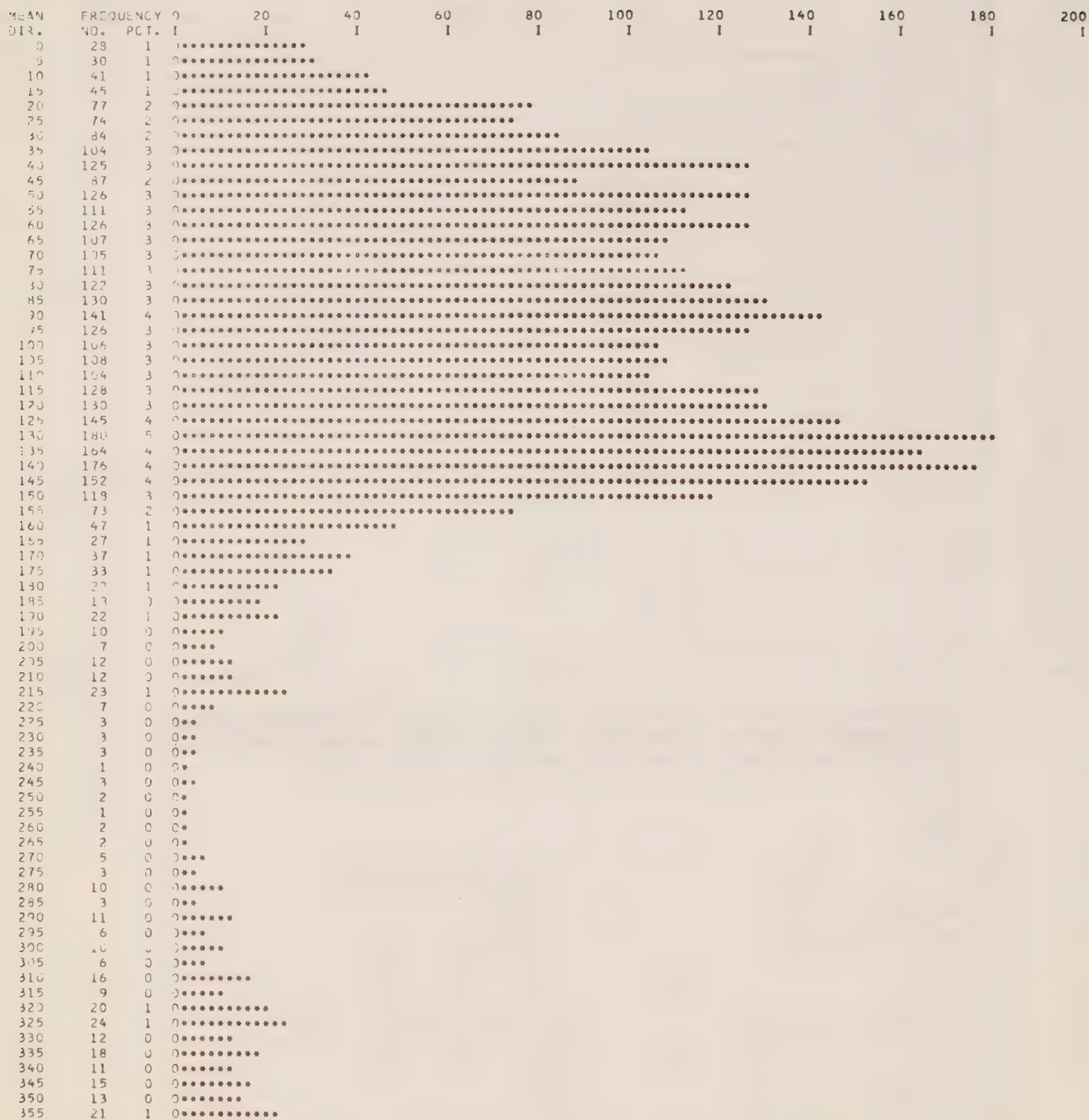
NUMBER OF OBSERVATIONS = 3994

MEAN SPEED = 128 MM/SEC

FIG. 12A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14.37/18/ 9/69 TO 8. 3/16/10/69



NUMBER OF OBSERVATIONS = 3994

FIG. 12B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 14.37/18/ 9/69 TO 8. 3/16/10/69

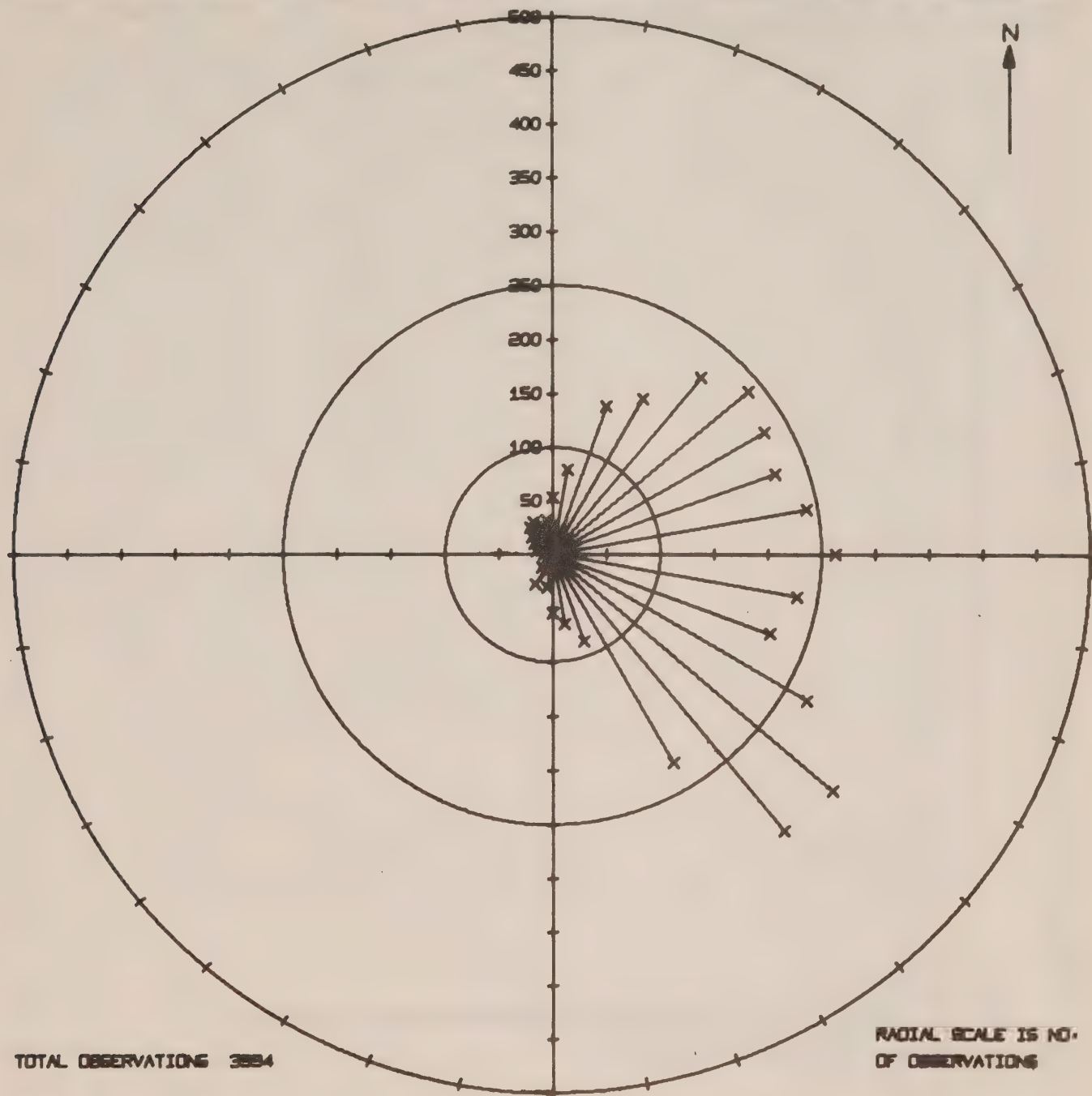


FIG. 12c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 14.37/18/ 9/69 TO 8. 3/16/10/69

MEAN TEMP.	FREQUENCY NU.	PCT. I	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I	1600 I	1800 I	2000 I
3.00	0	0	0	0	0	0	0	0	0	0	0	0
3.10	1	0	0	0	0	0	0	0	0	0	0	0
3.20	0	0	0	0	0	0	0	0	0	0	0	0
3.30	0	0	0	0	0	0	0	0	0	0	0	0
3.40	0	0	0	0	0	0	0	0	0	0	0	0
3.50	0	0	0	0	0	0	0	0	0	0	0	0
3.60	0	0	0	0	0	0	0	0	0	0	0	0
3.70	0	0	0	0	0	0	0	0	0	0	0	0
3.80	0	0	0	0	0	0	0	0	0	0	0	0
3.90	0	0	0	0	0	0	0	0	0	0	0	0
4.00	0	0	0	0	0	0	0	0	0	0	0	0
4.10	0	0	0	0	0	0	0	0	0	0	0	0
4.20	0	0	0	0	0	0	0	0	0	0	0	0
4.30	0	0	0	0	0	0	0	0	0	0	0	0
4.40	0	0	0	0	0	0	0	0	0	0	0	0
4.50	0	0	0	0	0	0	0	0	0	0	0	0
4.60	0	0	0	0	0	0	0	0	0	0	0	0
4.70	0	0	0	0	0	0	0	0	0	0	0	0
4.80	0	0	0	0	0	0	0	0	0	0	0	0
4.90	0	0	0	0	0	0	0	0	0	0	0	0
5.00	0	0	0	0	0	0	0	0	0	0	0	0
5.10	0	0	0	0	0	0	0	0	0	0	0	0
5.20	0	0	0	0	0	0	0	0	0	0	0	0
5.30	0	0	0	0	0	0	0	0	0	0	0	0
5.40	0	0	0	0	0	0	0	0	0	0	0	0
5.50	0	0	0	0	0	0	0	0	0	0	0	0
5.60	0	0	0	0	0	0	0	0	0	0	0	0
5.70	0	0	0	0	0	0	0	0	0	0	0	0
5.80	0	0	0	0	0	0	0	0	0	0	0	0
5.90	0	0	0	0	0	0	0	0	0	0	0	0
6.00	1	0	0	0	0	0	0	0	0	0	0	0
6.10	0	0	0	0	0	0	0	0	0	0	0	0
6.20	0	0	0	0	0	0	0	0	0	0	0	0
6.30	0	0	0	0	0	0	0	0	0	0	0	0
6.40	0	0	0	0	0	0	0	0	0	0	0	0
6.50	0	0	0	0	0	0	0	0	0	0	0	0
6.60	0	0	0	0	0	0	0	0	0	0	0	0
6.70	0	0	0	0	0	0	0	0	0	0	0	0
6.80	0	0	0	0	0	0	0	0	0	0	0	0
6.90	0	0	0	0	0	0	0	0	0	0	0	0
7.00	0	0	0	0	0	0	0	0	0	0	0	0
7.10	0	0	0	0	0	0	0	0	0	0	0	0
7.20	0	0	0	0	0	0	0	0	0	0	0	0
7.30	0	0	0	0	0	0	0	0	0	0	0	0
7.40	0	0	0	0	0	0	0	0	0	0	0	0
7.50	0	0	0	0	0	0	0	0	0	0	0	0
7.60	0	0	0	0	0	0	0	0	0	0	0	0
7.70	0	0	0	0	0	0	0	0	0	0	0	0
7.80	0	0	0	0	0	0	0	0	0	0	0	0
7.90	0	0	0	0	0	0	0	0	0	0	0	0
8.00	0	0	0	0	0	0	0	0	0	0	0	0
8.10	0	0	0	0	0	0	0	0	0	0	0	0
8.20	0	0	0	0	0	0	0	0	0	0	0	0
8.30	0	0	0	0	0	0	0	0	0	0	0	0
8.40	0	0	0	0	0	0	0	0	0	0	0	0
8.50	1	0	0	0	0	0	0	0	0	0	0	0
8.60	64	2	0***	0	0	0	0	0	0	0	0	0
8.70	156	4	0*****	0	0	0	0	0	0	0	0	0
8.80	242	6	0*****	0	0	0	0	0	0	0	0	0
8.90	1467	37	0*****	0	0	0	0	0	0	0	0	0
9.00	656	16	0*****	0	0	0	0	0	0	0	0	0
9.10	480	12	0*****	0	0	0	0	0	0	0	0	0
9.20	650	17	0*****	0	0	0	0	0	0	0	0	0
9.30	203	5	0*****	0	0	0	0	0	0	0	0	0
9.40	39	1	0**	0	0	0	0	0	0	0	0	0
9.50	22	1	0*	0	0	0	0	0	0	0	0	0
9.60	2	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 9.60 = 0

NUMBER OF OBSERVATIONS = 3994

MEAN TEMP = 9.00 DEG. C.

FIG. 12d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

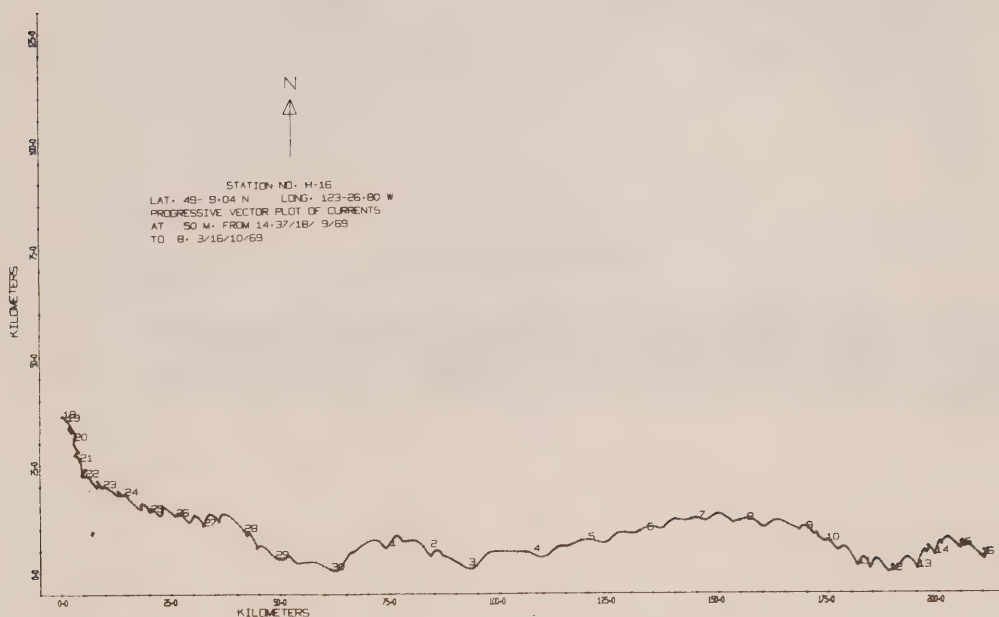
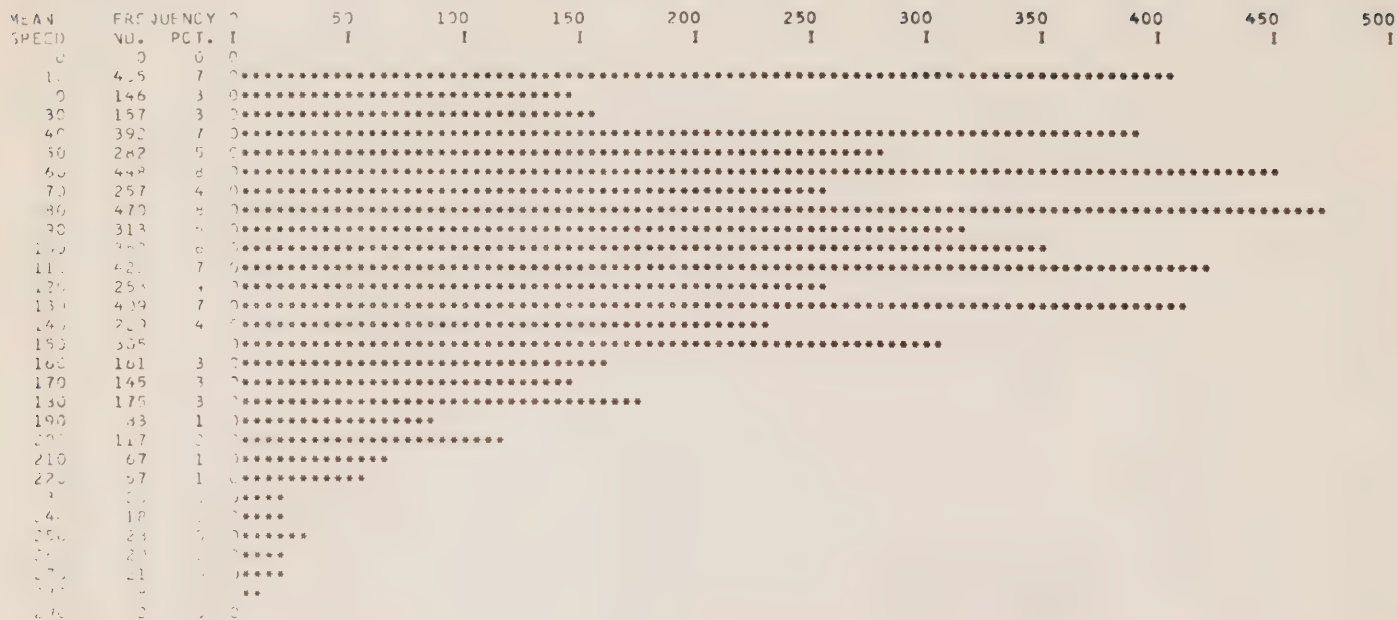


Fig. 12e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 28-day period during September 18 through October 16, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11. 6/15/10/69 TO 10.59/25/11/69



NUMBER OF SPEEDS GREATER THAN 290 = 2

NUMBER OF OBSERVATIONS = 5762

MEAN SPEED = 99 MM/SEC

FIG. 13A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 3.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEC. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11.57/16/10/69 TO 10.59/25/11/69

DIR.	FREQUENCY NO.	PERCENT PCT.	50	100	150	200	250	300	350	400	450	500
0	125	2	0	0	0	0	0	0	0	0	0	0
5	144	3	0	0	0	0	0	0	0	0	0	0
10	135	2	0	0	0	0	0	0	0	0	0	0
15	170	3	0	0	0	0	0	0	0	0	0	0
20	235	4	0	0	0	0	0	0	0	0	0	0
25	255	4	0	0	0	0	0	0	0	0	0	0
30	151	3	0	0	0	0	0	0	0	0	0	0
35	119	2	0	0	0	0	0	0	0	0	0	0
40	123	2	0	0	0	0	0	0	0	0	0	0
45	137	2	0	0	0	0	0	0	0	0	0	0
50	114	2	0	0	0	0	0	0	0	0	0	0
55	93	2	0	0	0	0	0	0	0	0	0	0
60	125	2	0	0	0	0	0	0	0	0	0	0
65	105	2	0	0	0	0	0	0	0	0	0	0
70	74	2	0	0	0	0	0	0	0	0	0	0
75	136	2	0	0	0	0	0	0	0	0	0	0
80	127	2	0	0	0	0	0	0	0	0	0	0
85	110	2	0	0	0	0	0	0	0	0	0	0
90	113	2	0	0	0	0	0	0	0	0	0	0
95	84	1	0	0	0	0	0	0	0	0	0	0
100	134	2	0	0	0	0	0	0	0	0	0	0
105	127	2	0	0	0	0	0	0	0	0	0	0
110	154	3	0	0	0	0	0	0	0	0	0	0
115	167	3	0	0	0	0	0	0	0	0	0	0
120	170	3	0	0	0	0	0	0	0	0	0	0
125	171	3	0	0	0	0	0	0	0	0	0	0
130	134	2	0	0	0	0	0	0	0	0	0	0
135	133	2	0	0	0	0	0	0	0	0	0	0
140	124	2	0	0	0	0	0	0	0	0	0	0
145	75	2	0	0	0	0	0	0	0	0	0	0
150	59	1	0	0	0	0	0	0	0	0	0	0
155	54	1	0	0	0	0	0	0	0	0	0	0
160	57	1	0	0	0	0	0	0	0	0	0	0
165	52	1	0	0	0	0	0	0	0	0	0	0
170	50	1	0	0	0	0	0	0	0	0	0	0
175	42	1	0	0	0	0	0	0	0	0	0	0
180	56	1	0	0	0	0	0	0	0	0	0	0
185	41	1	0	0	0	0	0	0	0	0	0	0
190	51	1	0	0	0	0	0	0	0	0	0	0
195	44	1	0	0	0	0	0	0	0	0	0	0
200	27	0	0	0	0	0	0	0	0	0	0	0
205	34	1	0	0	0	0	0	0	0	0	0	0
210	38	1	0	0	0	0	0	0	0	0	0	0
215	29	1	0	0	0	0	0	0	0	0	0	0
220	39	1	0	0	0	0	0	0	0	0	0	0
225	40	1	0	0	0	0	0	0	0	0	0	0
230	10	0	0	0	0	0	0	0	0	0	0	0
235	34	1	0	0	0	0	0	0	0	0	0	0
240	17	0	0	0	0	0	0	0	0	0	0	0
245	25	0	0	0	0	0	0	0	0	0	0	0
250	21	0	0	0	0	0	0	0	0	0	0	0
255	27	0	0	0	0	0	0	0	0	0	0	0
260	23	0	0	0	0	0	0	0	0	0	0	0
265	15	0	0	0	0	0	0	0	0	0	0	0
270	24	0	0	0	0	0	0	0	0	0	0	0
275	19	0	0	0	0	0	0	0	0	0	0	0
280	23	0	0	0	0	0	0	0	0	0	0	0
285	20	0	0	0	0	0	0	0	0	0	0	0
290	31	1	0	0	0	0	0	0	0	0	0	0
295	30	1	0	0	0	0	0	0	0	0	0	0
300	29	1	0	0	0	0	0	0	0	0	0	0
305	48	1	0	0	0	0	0	0	0	0	0	0
310	26	0	0	0	0	0	0	0	0	0	0	0
315	33	1	0	0	0	0	0	0	0	0	0	0
320	47	1	0	0	0	0	0	0	0	0	0	0
325	59	1	0	0	0	0	0	0	0	0	0	0
330	69	1	0	0	0	0	0	0	0	0	0	0
335	72	1	0	0	0	0	0	0	0	0	0	0
340	49	1	0	0	0	0	0	0	0	0	0	0
345	63	1	0	0	0	0	0	0	0	0	0	0
350	65	1	0	0	0	0	0	0	0	0	0	0
355	77	1	0	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 5762

FIG. 13b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

STATION NO. H-16 LAT. 49-9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 11. 6/16/10/69 TO 10.59/25/11/69

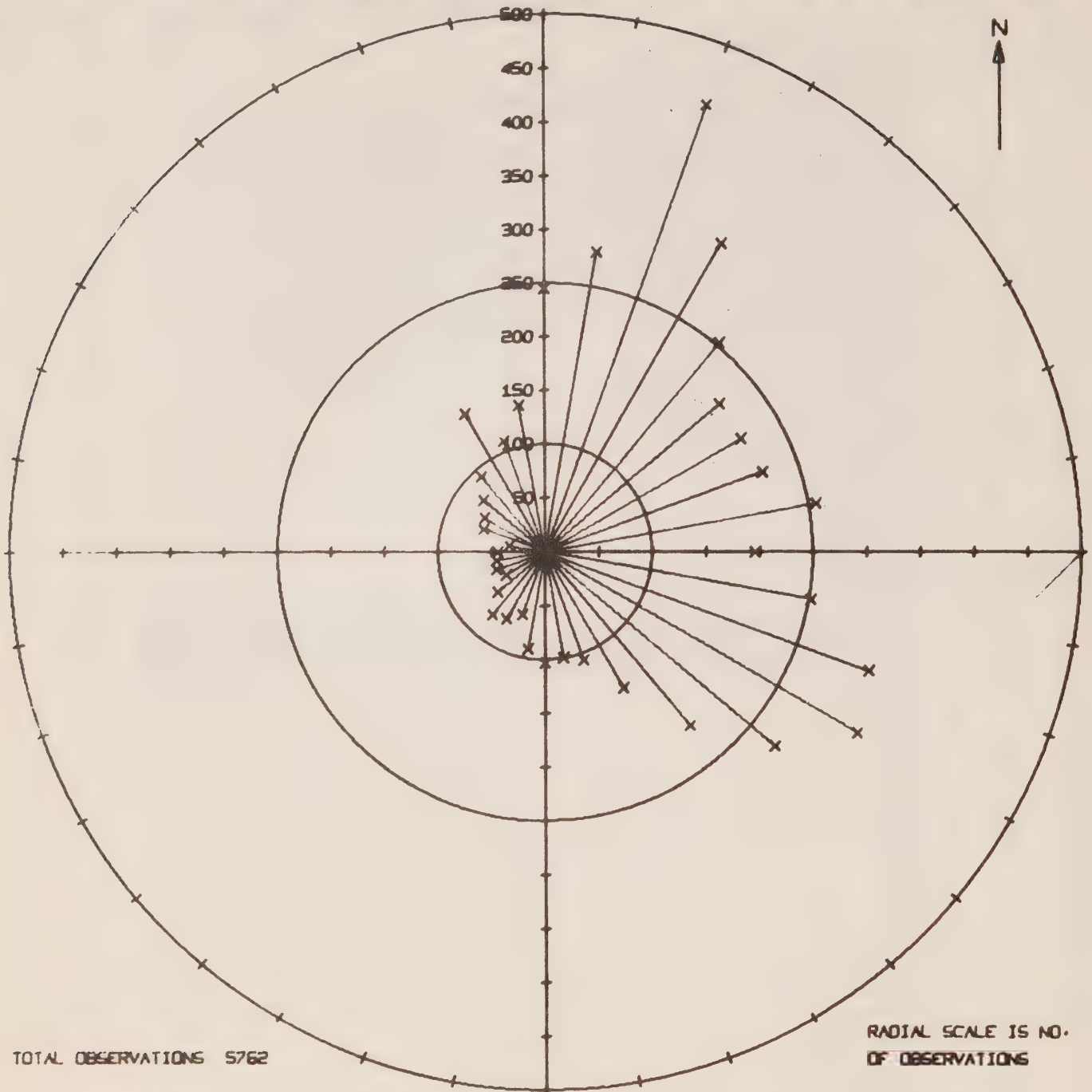
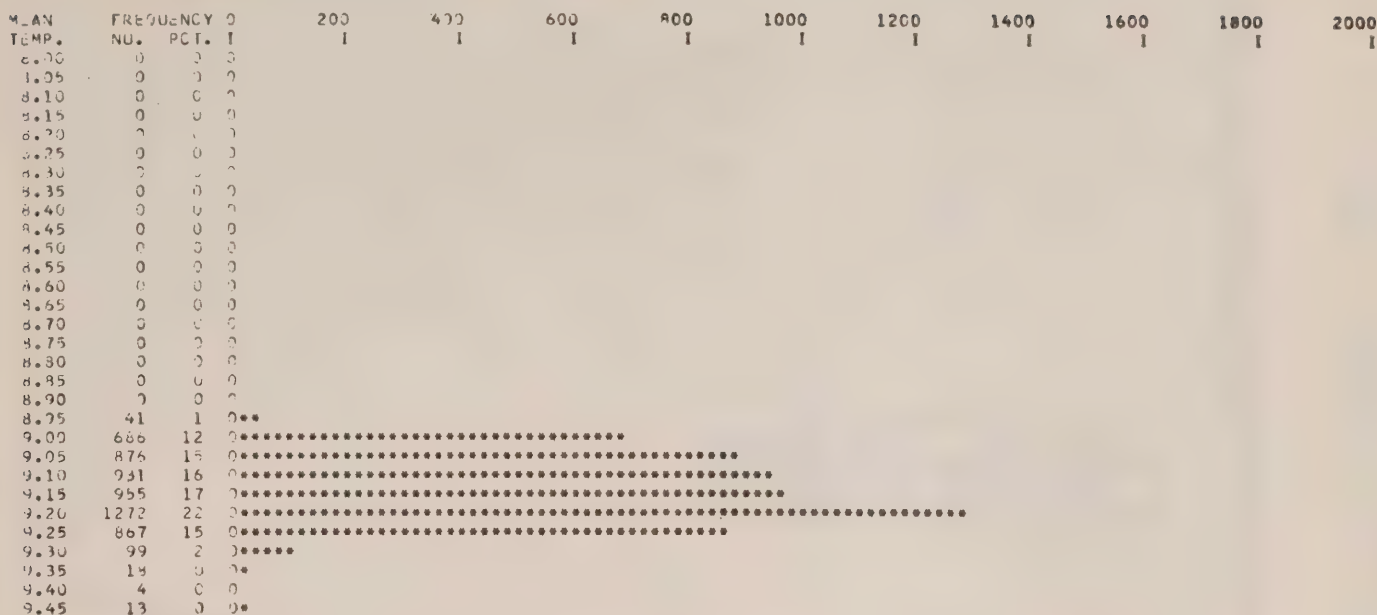


FIG. 13c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 11. 6/16/10/69 TO 10.59/25/11/69



NUMBER OF TEMP. GREATER THAN 9.45 = 0 NUMBER OF OBSERVATIONS = 5762 MEAN TEMP = 9.14 DEG. C.

FIG. 13D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

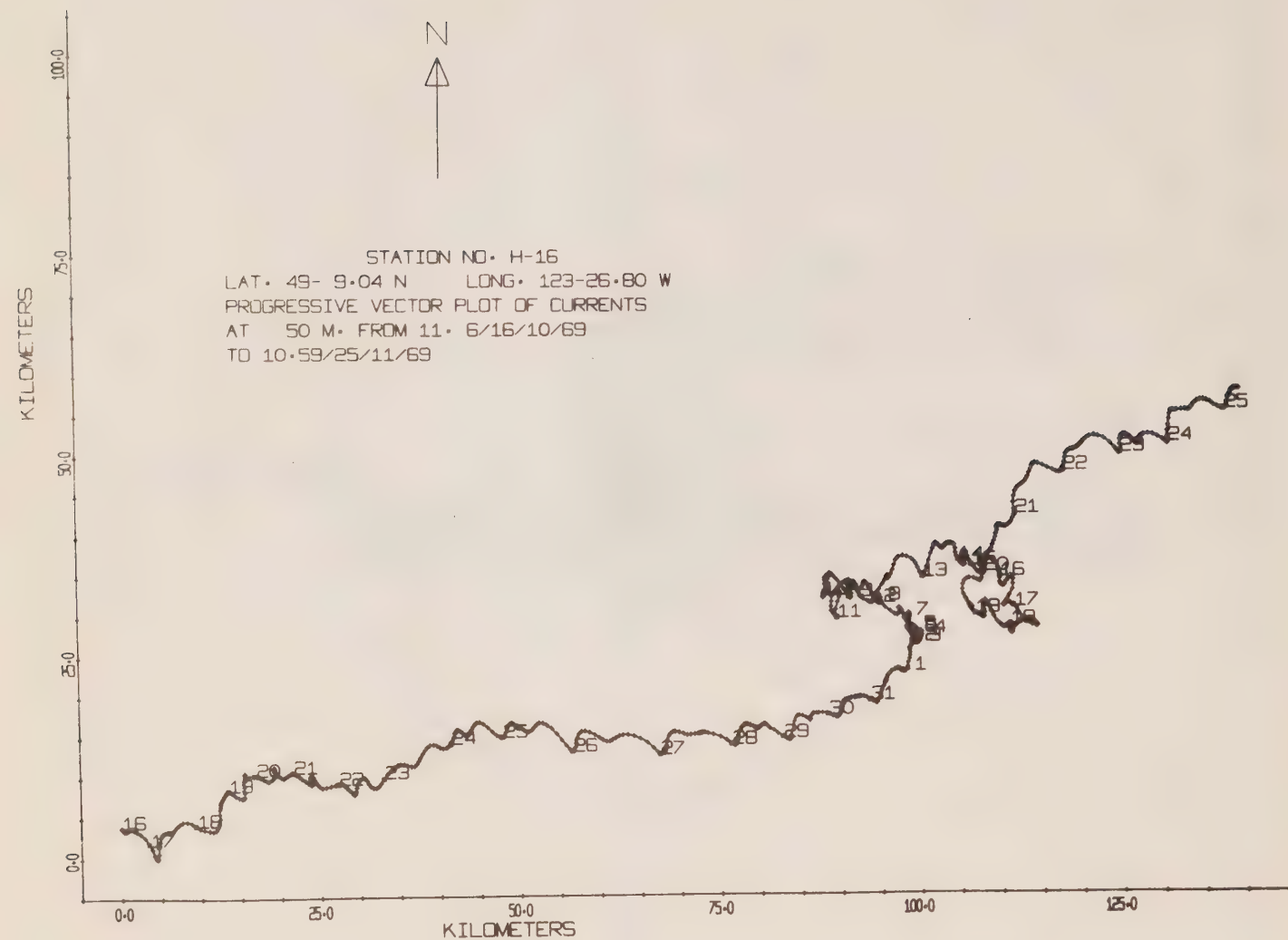
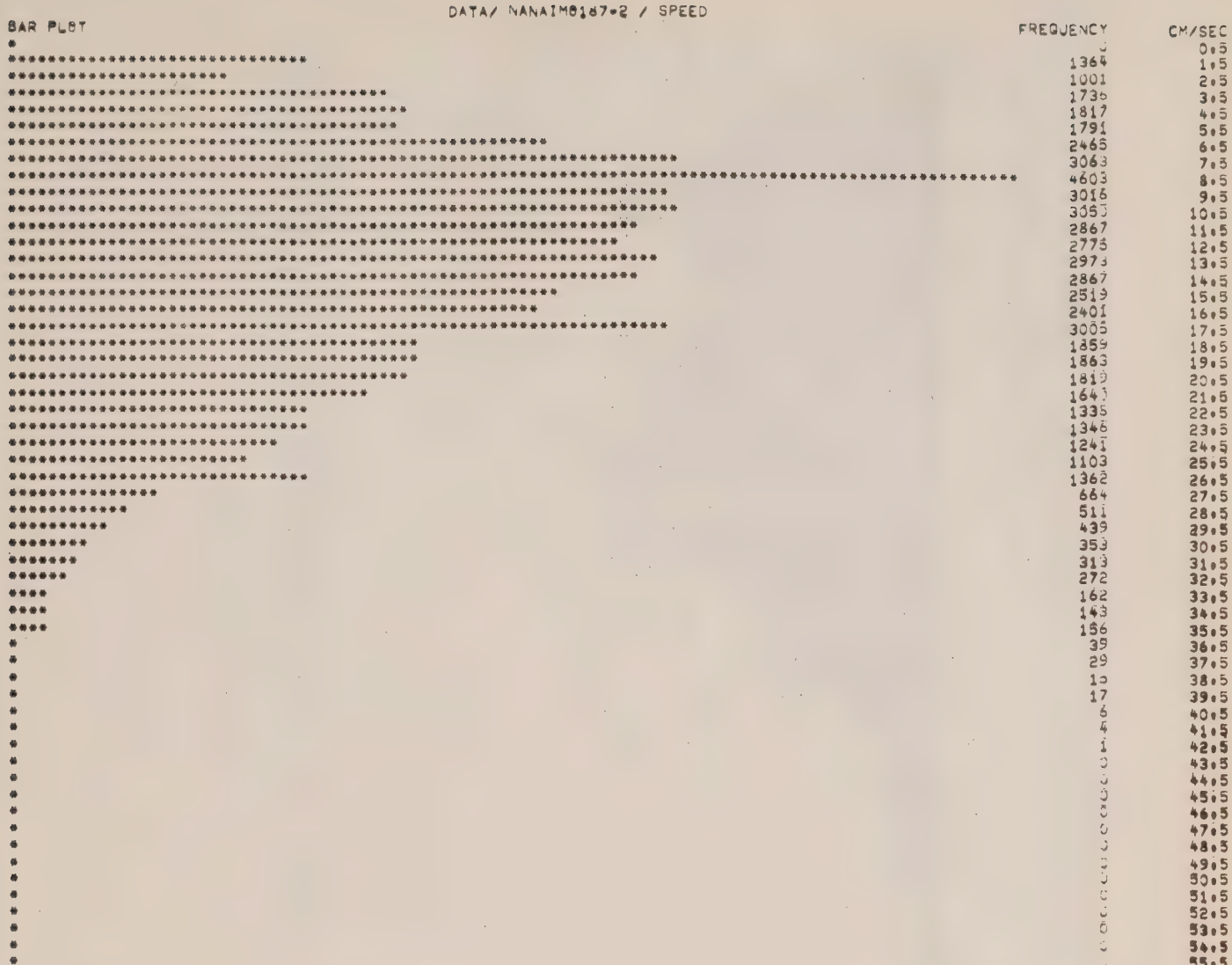


Fig. 13e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 40-day period during October 16 through November 25, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.



TOTAL NUMBER OF INPUT DATA = 60008 WITH AVERAGE VALUE = 14.05 CM/SEC

NUMBER OF DATA OUT OF RANGE = 0

SPANNING RANGE

FROM 69- XI -25 15.07.00

TO 70- I -03 06.08.05

Station H-16

40 metre depth

NUMBER OF NON-STANDARD RECORDS = 0

NUMBER OF CHECKSUM ERRORS = 0

JOB END/ 15:45 APR 22, 1970

FIG. 14A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 15-MINUTE INTERVALS OVER 45-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

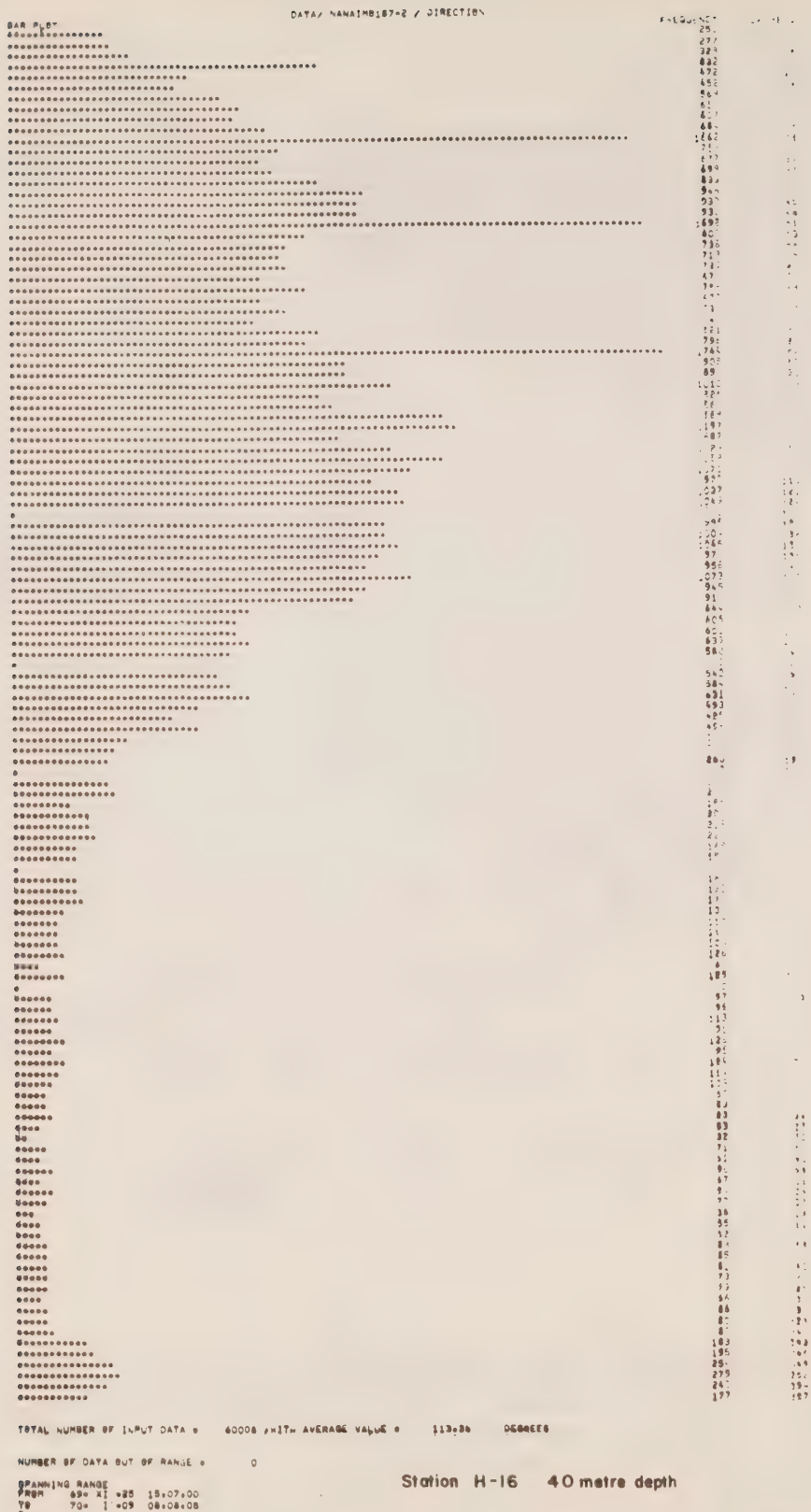


FIG. 14b. A HISTOGRAM OF DIRECTION ("TRUE"), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 15-MINUTE INTERVALS OVER 45-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970.

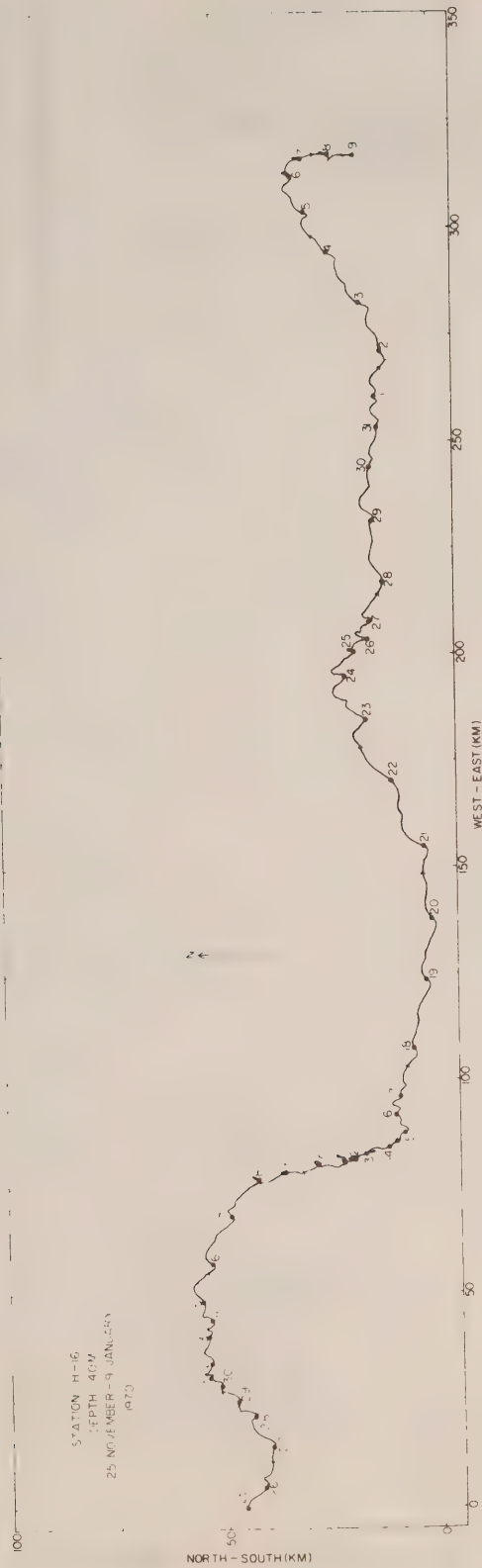


Fig. 14c. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 15-minute intervals over 45-day period during November 25, 1969 through January 9, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire area of the location of the instrument was the same as at this location.

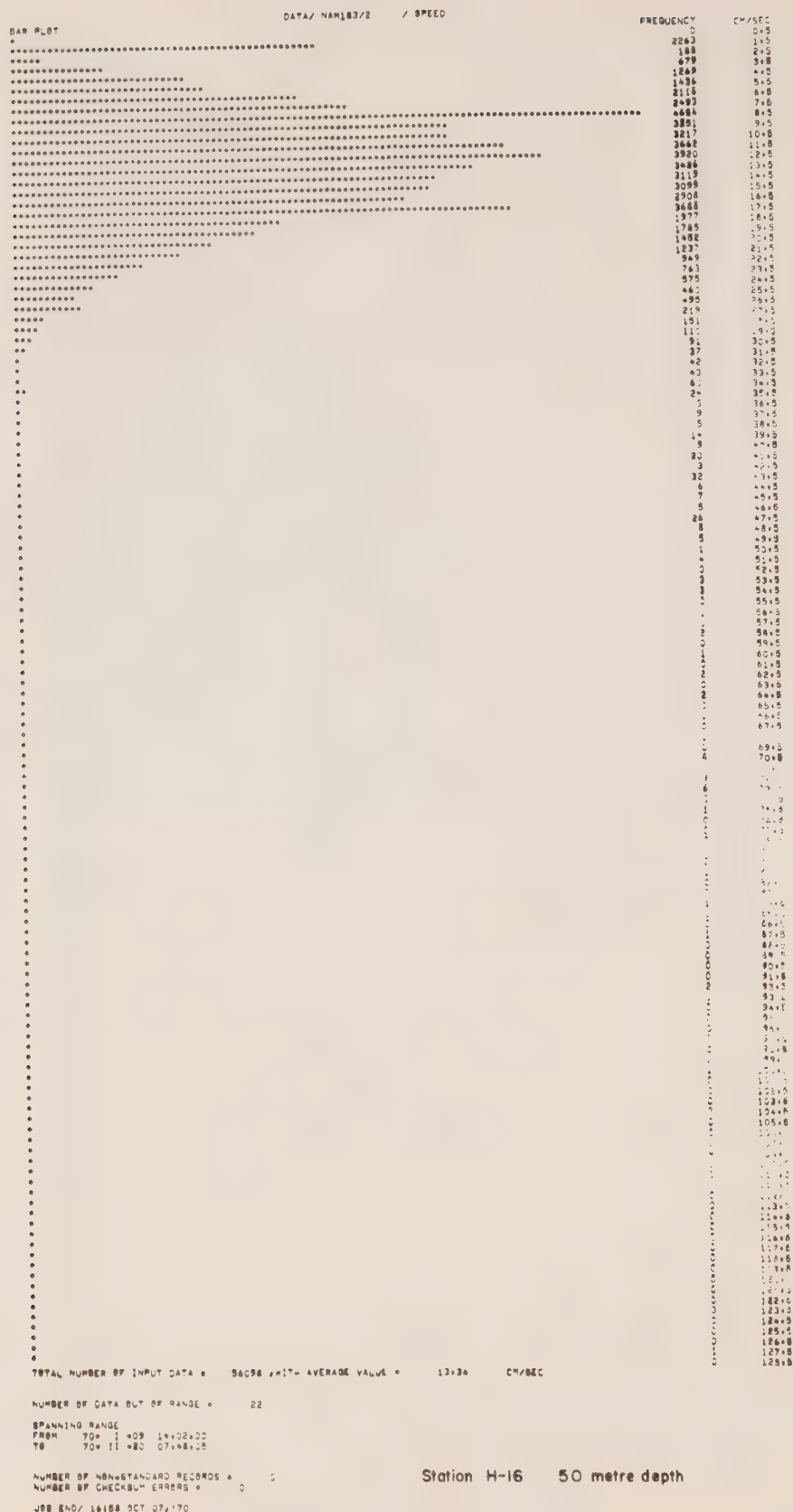
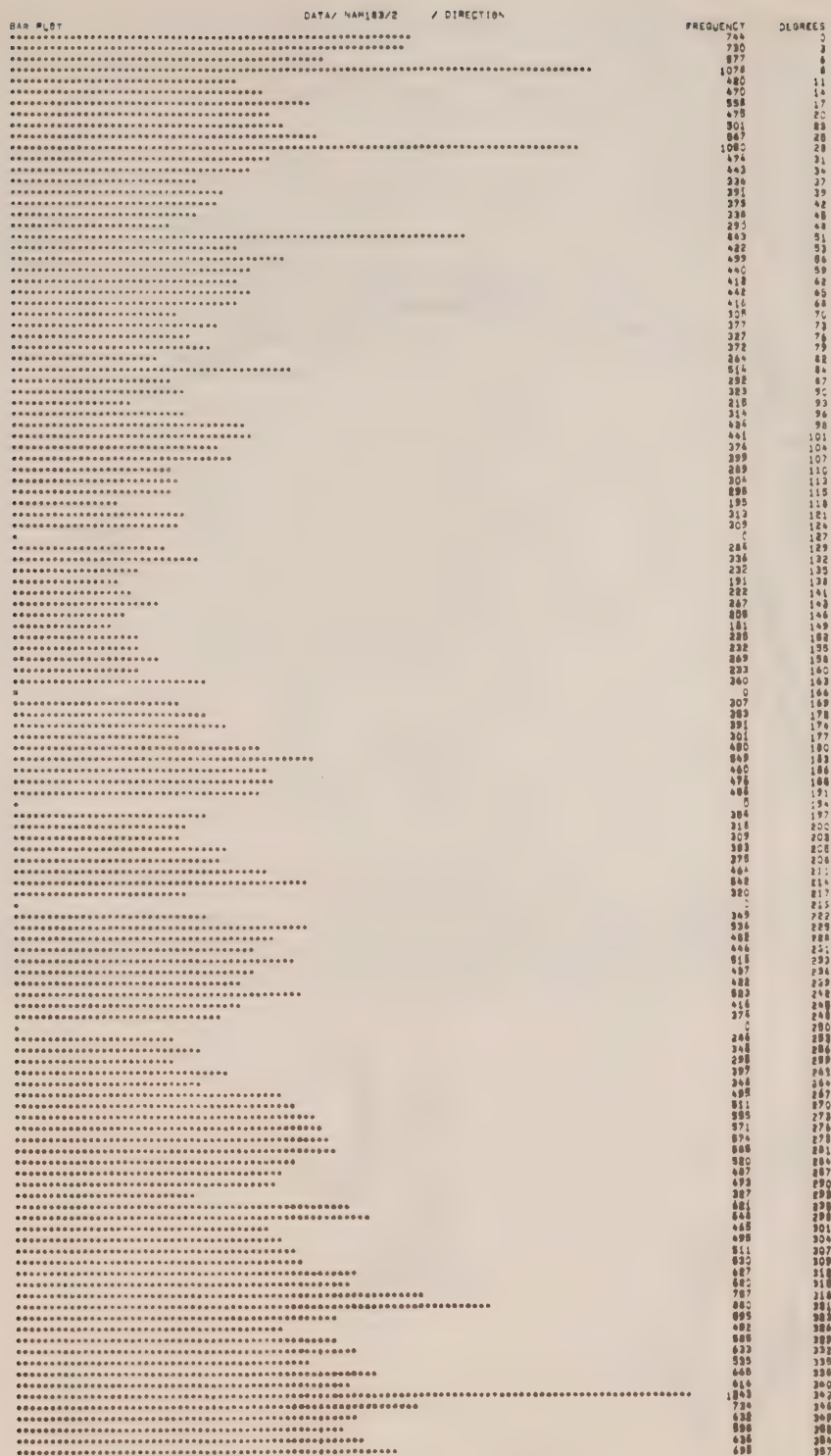


FIG. 15A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 15-MINUTE INTERVALS OVER 42-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 20, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".



TOTAL NUMBER OF INPUT DATA = 56098 WITH AVERAGE VALUE = 189.01 DEGREE

NUMBER OF DATA OUT OF RANGE = 0

SPANNING RANGE
FROM 70= 1 +09 18.08.00
TO 70= 11 +20 07.08.08

Station H-16 50 metre depth

FIG. 15b. A HISTOGRAM OF DIRECTION ("TRUE"), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 15 MINUTE INTERVALS OVER 42-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 20, 1970.

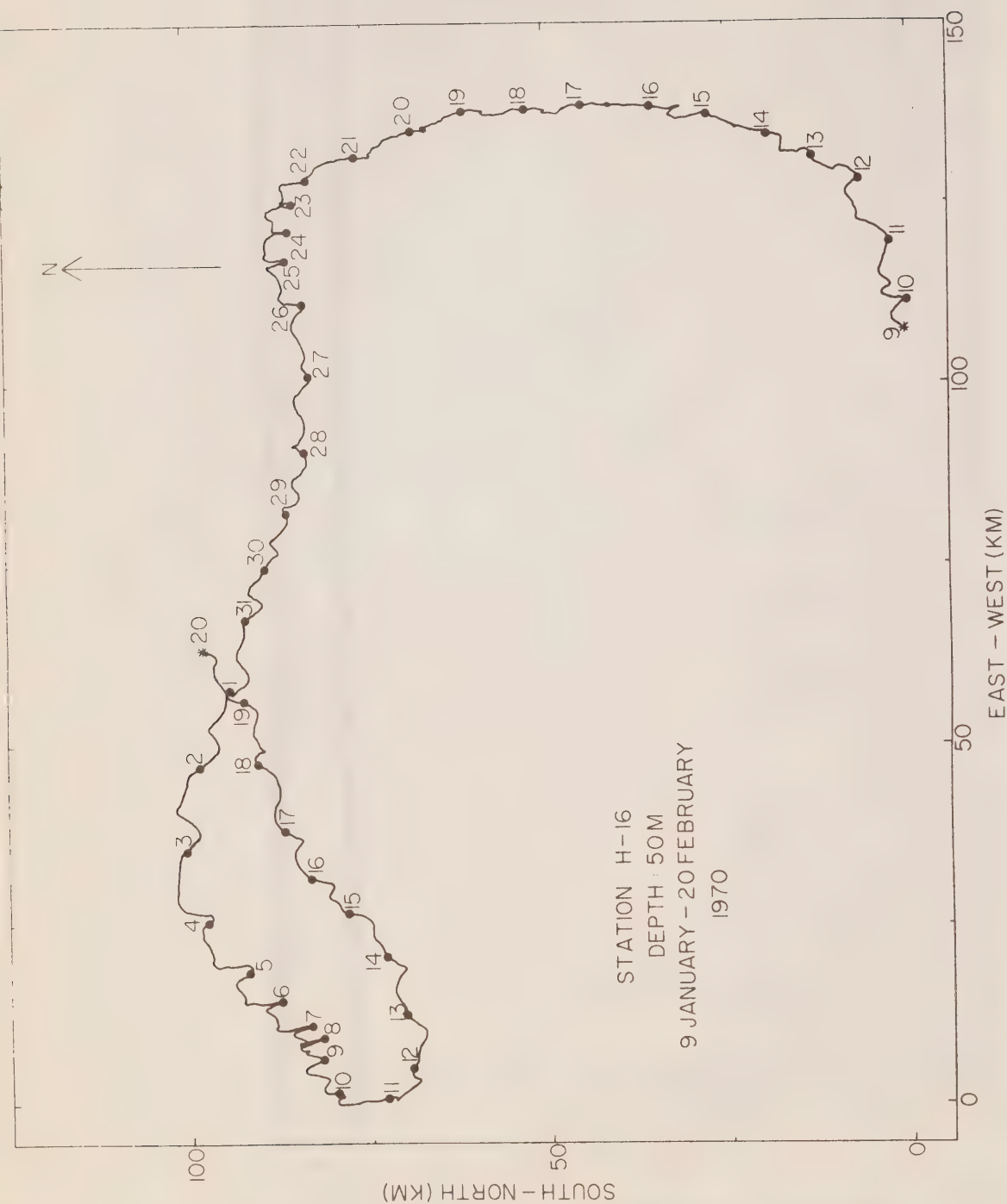


Fig. 15c.

A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 15-minute intervals over 42-day period during January 9 through February 20, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.34 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11.49/20/ 2/70 TO 9. 5/25/ 3/70

MEAN SPEED	FREQUENCY NO.	PCT.	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	0	0										
10	163	3	0*****									
20	58	1	0*****									
30	94	2	0*****									
40	184	4	0*****									
50	187	4	0*****									
60	326	7	0*****									
70	261	6	0*****									
80	504	11	0*****									
90	310	7	0*****									
100	268	6	0*****									
110	374	8	0*****									
120	188	4	0*****									
130	298	6	0*****									
140	158	3	0*****									
150	245	5	0*****									
160	183	4	0*****									
170	156	3	0*****									
180	194	4	0*****									
190	85	2	0*****									
200	132	3	0*****									
210	71	2	0*****									
220	70	1	0*****									
230	36	1	0****									
240	29	1	0***									
250	47	1	0****									
260	20	0	0**									
270	28	1	0***									
280	13	0	0*									
290	13	0	0*									
300	2	0	0									
310	2	0	0									
320	4	0	0									
330	1	0	0									
340	4	0	0									
350	3	0	0									
360	4	0	0									
370	0	0	0									
380	1	0	0									

NUMBER OF SPEEDS GREATER THAN 300 = 1 NUMBER OF OBSERVATIONS = 4736 MEAN SPEED = 113 MM/SEC

FIG. 16A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING FEBRUARY 20 THROUGH MARCH 25, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11.49/20/ 2/70 TO 09.57/25/ 3/70

MEAN DIR.	FREQUENCY NO.	PCT.	0	20	40	60	80	100	120	140	160	180	200
0	74	2	0	0	0	0	0	0	0	0	0	0	0
5	56	1	0	0	0	0	0	0	0	0	0	0	0
10	75	2	0	0	0	0	0	0	0	0	0	0	0
15	58	1	0	0	0	0	0	0	0	0	0	0	0
20	110	3	0	0	0	0	0	0	0	0	0	0	0
25	110	3	0	0	0	0	0	0	0	0	0	0	0
30	110	3	0	0	0	0	0	0	0	0	0	0	0
35	110	3	0	0	0	0	0	0	0	0	0	0	0
40	102	2	0	0	0	0	0	0	0	0	0	0	0
45	110	3	0	0	0	0	0	0	0	0	0	0	0
50	85	2	0	0	0	0	0	0	0	0	0	0	0
55	68	1	0	0	0	0	0	0	0	0	0	0	0
60	66	1	0	0	0	0	0	0	0	0	0	0	0
65	64	2	0	0	0	0	0	0	0	0	0	0	0
70	73	2	0	0	0	0	0	0	0	0	0	0	0
75	73	2	0	0	0	0	0	0	0	0	0	0	0
80	63	1	0	0	0	0	0	0	0	0	0	0	0
85	65	1	0	0	0	0	0	0	0	0	0	0	0
90	67	1	0	0	0	0	0	0	0	0	0	0	0
95	64	1	0	0	0	0	0	0	0	0	0	0	0
100	65	2	0	0	0	0	0	0	0	0	0	0	0
105	103	2	0	0	0	0	0	0	0	0	0	0	0
110	103	2	0	0	0	0	0	0	0	0	0	0	0
115	92	2	0	0	0	0	0	0	0	0	0	0	0
120	103	2	0	0	0	0	0	0	0	0	0	0	0
125	94	2	0	0	0	0	0	0	0	0	0	0	0
130	99	2	0	0	0	0	0	0	0	0	0	0	0
135	82	2	0	0	0	0	0	0	0	0	0	0	0
140	75	1	0	0	0	0	0	0	0	0	0	0	0
145	52	1	0	0	0	0	0	0	0	0	0	0	0
150	57	1	0	0	0	0	0	0	0	0	0	0	0
155	21	0	0	0	0	0	0	0	0	0	0	0	0
160	19	0	0	0	0	0	0	0	0	0	0	0	0
165	33	1	0	0	0	0	0	0	0	0	0	0	0
170	40	1	0	0	0	0	0	0	0	0	0	0	0
175	49	1	0	0	0	0	0	0	0	0	0	0	0
180	47	1	0	0	0	0	0	0	0	0	0	0	0
185	55	1	0	0	0	0	0	0	0	0	0	0	0
190	41	1	0	0	0	0	0	0	0	0	0	0	0
195	73	2	0	0	0	0	0	0	0	0	0	0	0
200	60	1	0	0	0	0	0	0	0	0	0	0	0
205	74	2	0	0	0	0	0	0	0	0	0	0	0
210	64	1	0	0	0	0	0	0	0	0	0	0	0
215	59	1	0	0	0	0	0	0	0	0	0	0	0
220	45	1	0	0	0	0	0	0	0	0	0	0	0
225	47	1	0	0	0	0	0	0	0	0	0	0	0
230	60	1	0	0	0	0	0	0	0	0	0	0	0
235	44	1	0	0	0	0	0	0	0	0	0	0	0
240	38	1	0	0	0	0	0	0	0	0	0	0	0
245	35	1	0	0	0	0	0	0	0	0	0	0	0
250	45	1	0	0	0	0	0	0	0	0	0	0	0
255	50	1	0	0	0	0	0	0	0	0	0	0	0
260	59	1	0	0	0	0	0	0	0	0	0	0	0
265	55	1	0	0	0	0	0	0	0	0	0	0	0
270	71	2	0	0	0	0	0	0	0	0	0	0	0
275	63	1	0	0	0	0	0	0	0	0	0	0	0
280	40	1	0	0	0	0	0	0	0	0	0	0	0
285	52	1	0	0	0	0	0	0	0	0	0	0	0
290	46	1	0	0	0	0	0	0	0	0	0	0	0
295	64	1	0	0	0	0	0	0	0	0	0	0	0
300	61	1	0	0	0	0	0	0	0	0	0	0	0
305	48	1	0	0	0	0	0	0	0	0	0	0	0
310	49	1	0	0	0	0	0	0	0	0	0	0	0
315	46	1	0	0	0	0	0	0	0	0	0	0	0
320	34	1	0	0	0	0	0	0	0	0	0	0	0
325	44	1	0	0	0	0	0	0	0	0	0	0	0
330	65	1	0	0	0	0	0	0	0	0	0	0	0
335	50	1	0	0	0	0	0	0	0	0	0	0	0
340	54	1	0	0	0	0	0	0	0	0	0	0	0
345	49	1	0	0	0	0	0	0	0	0	0	0	0
350	30	2	0	0	0	0	0	0	0	0	0	0	0
355	79	2	0	0	0	0	0	0	0	0	0	0	0

TOTAL NUMBER OF OBSERVATIONS = 4736

FIG. 16B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING FEBRUARY 20 THROUGH MARCH 25, 1970.

STATION NO. H-16 LAT. 49-9.04 N LONG. 123-26.80 W
 DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 11.48/20/ 2/70 TO 9.5/25/ 3/70

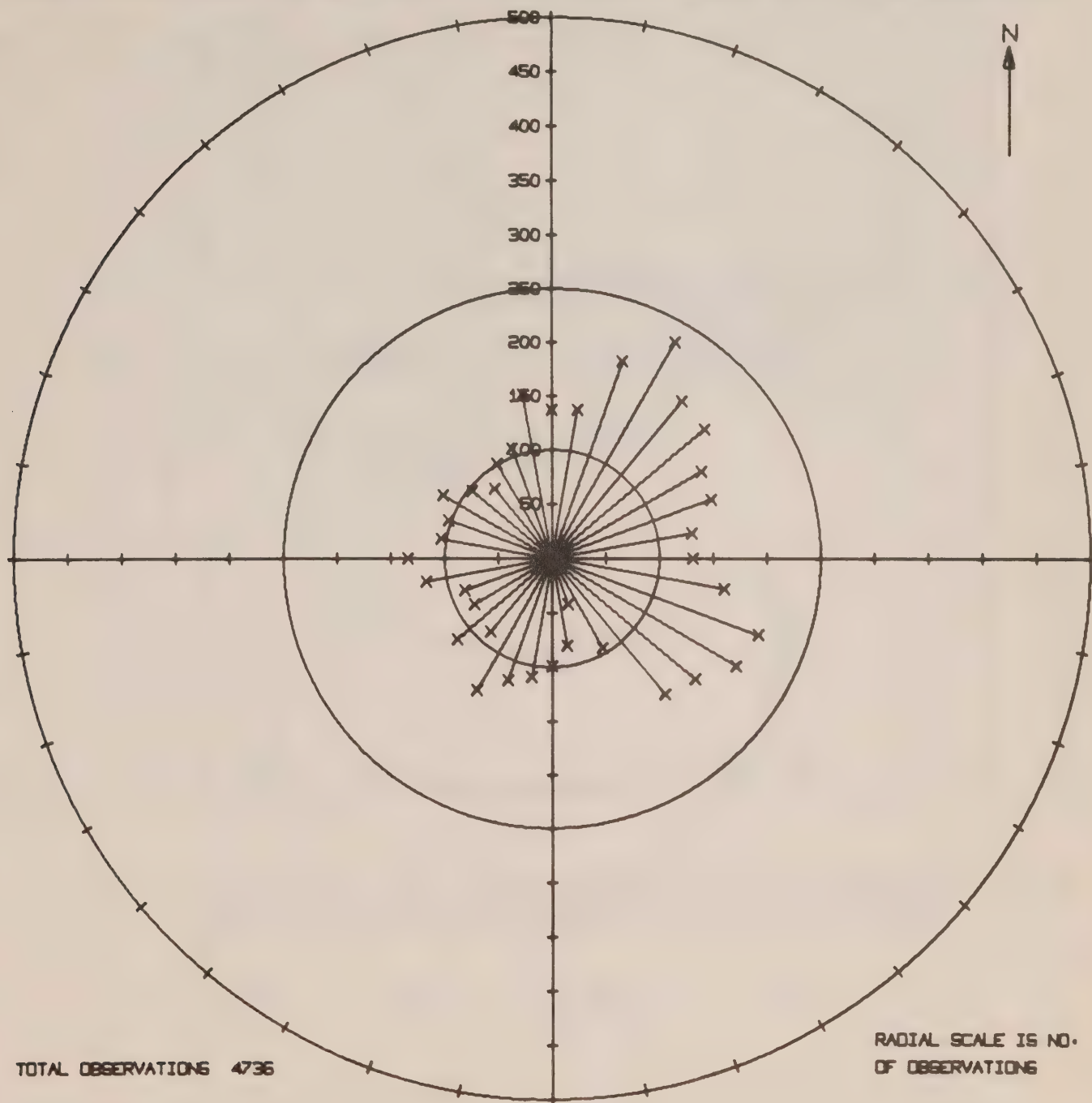
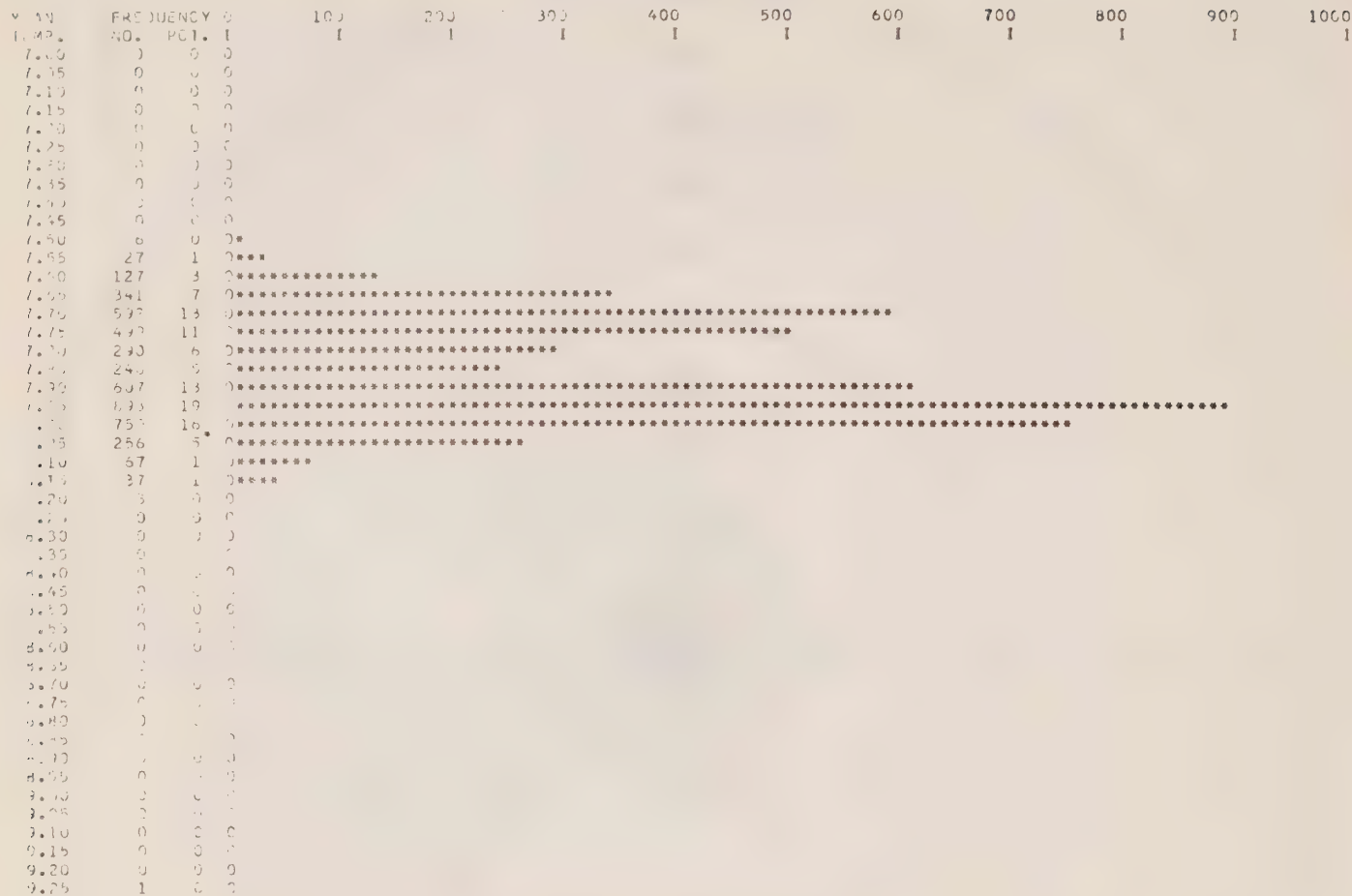


FIG. 16c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING FEBRUARY 20 THROUGH MARCH 25, 1970.

STATION NO. H-16 LAT. 49- 9.34 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 11.49/20/ 2/70 TO 9. 5/25/ 3/70



NUMBER OF TEMP. GREATER THAN 9.25 = 0

NUMBER OF OBSERVATIONS = 4736

MEAN TEMP = 7.86 DEG. C.

FIG. 16d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING FEBRUARY 20 THROUGH MARCH 25, 1970.

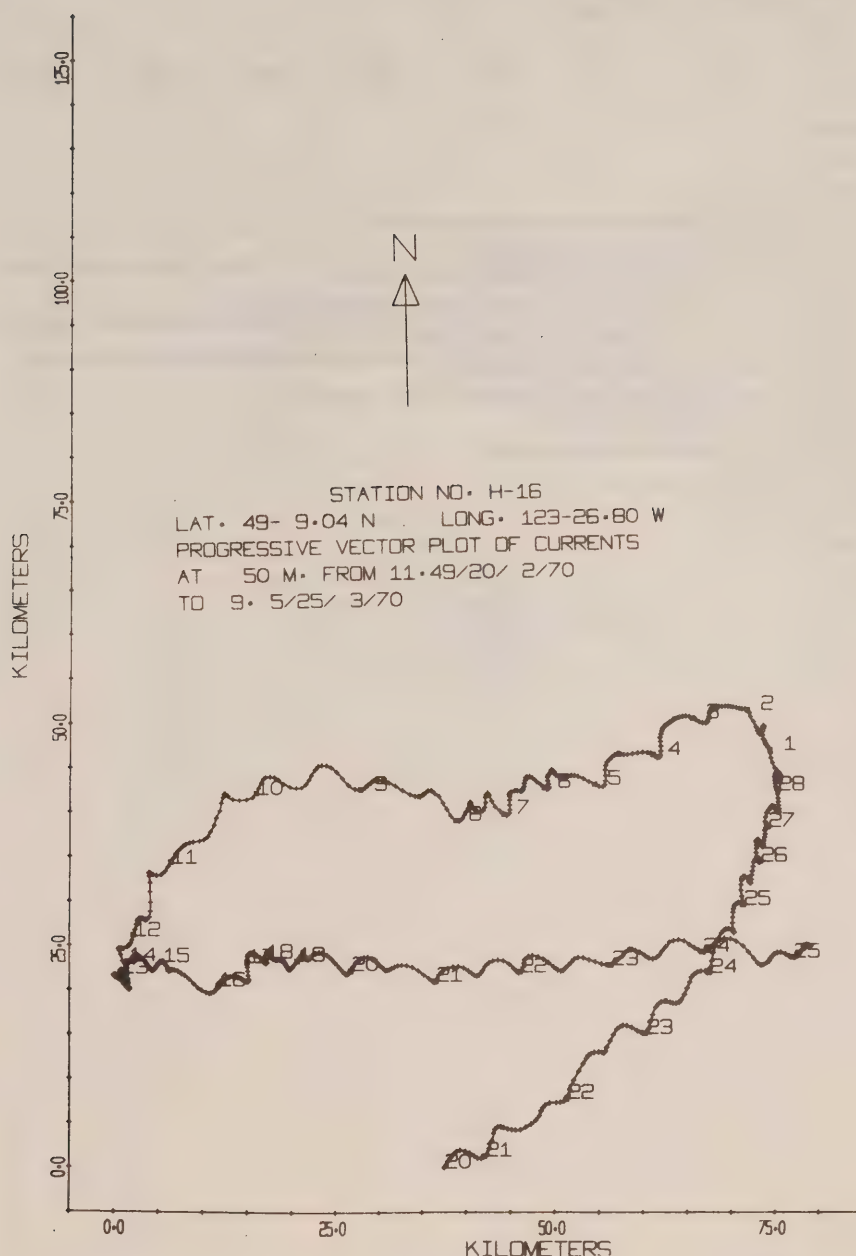


Fig. 16e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 33-day period during February 20 through March 25, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 12.5/25/ 3/70 TO 17.25/26/ 4/70

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
0	0	0	0	I	I	I	I	I	I	I	I	I	I
10	60	1	0	*****									
20	27	1	0	*****									
30	53	1	0	*****									
40	95	2	0	*****									
50	114	2	0	*****									
60	246	5	0	*****									
70	227	5	0	*****									
80	403	9	0	*****									
90	264	6	0	*****									
100	311	7	0	*****									
110	460	10	0	*****									
120	264	6	0	*****									
130	397	9	0	*****									
140	227	5	0	*****									
150	296	5	0	*****									
160	176	4	0	*****									
170	158	3	0	*****									
180	197	4	0	*****									
190	95	2	0	*****									
200	151	3	0	*****									
210	94	2	0	*****									
220	103	2	0	*****									
230	51	1	0	*****									
240	36	1	0	*****									
250	42	1	0	*****									
260	18	0	0	****									
270	21	0	0	****									
280	20	0	0	****									
290	15	0	0	***									
300	5	0	0	*									
310	6	0	0	*									
320	4	0	0	*									
330	1	0	0										
340	0	0	0										
350	1	0	0										
360	0	0	0										
370	0	0	0										
380	0	0	0										
390	0	0	0										
400	0	0	0										
410	0	0	0										
420	0	0	0										
430	0	0	0										
440	0	0	0										
450	0	0	0										
460	0	0	0										
470	0	0	0										
480	0	0	0										
490	0	0	0										
500	0	0	0										
510	0	0	0										
520	0	0	0										
530	0	0	0										
540	0	0	0										
550	0	0	0										
560	0	0	0										
570	0	0	0										
580	0	0	0										
590	0	0	0										
600	1	0	0										

NUMBER OF SPEEDS GREATER THAN 600 = 0

NUMBER OF OBSERVATIONS = 4641

MEAN SPEED = 124 MM/SEC

FIG. 17A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 32-DAY PERIOD DURING MARCH 25 THROUGH APRIL 26, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49-09.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 12. 5/25/ 3/70 TO 17.25/26/ 4/70

MEAN DIR.	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350	400	450
0	32	1	0	*****								
5	30	1	0	*****								
10	50	1	0	*****								
15	54	1	0	*****								
20	86	2	0	*****								
25	85	2	0	*****								
30	120	3	0	*****								
35	117	3	0	*****								
40	131	3	0	*****								
45	80	2	0	*****								
50	78	2	0	*****								
55	81	2	0	*****								
60	79	2	0	*****								
65	82	2	0	*****								
70	80	2	0	*****								
75	82	2	0	*****								
80	72	2	0	*****								
85	77	2	0	*****								
90	73	2	0	*****								
95	99	2	0	*****								
100	90	2	0	*****								
105	112	2	0	*****								
110	122	3	0	*****								
115	99	2	0	*****								
120	133	3	0	*****								
125	146	3	0	*****								
130	159	3	0	*****								
135	203	4	0	*****								
140	223	5	0	*****								
145	227	5	0	*****								
150	175	3	0	*****								
155	118	2	0	*****								
160	72	2	0	*****								
165	60	1	0	*****								
170	85	2	0	*****								
175	76	2	0	*****								
180	65	1	0	*****								
185	73	1	0	*****								
190	68	1	0	*****								
195	52	1	0	*****								
200	54	1	0	*****								
205	29	1	0	*****								
210	20	0	0	*****								
215	16	0	0	*****								
220	19	0	0	*****								
225	22	0	0	*****								
230	27	1	0	*****								
235	25	1	0	*****								
240	21	0	0	*****								
245	22	0	0	*****								
250	32	1	0	*****								
255	44	1	0	*****								
260	23	0	0	*****								
265	23	0	0	*****								
270	19	0	0	*****								
275	15	0	0	*****								
280	21	0	0	*****								
285	23	0	0	*****								
290	21	0	0	*****								
295	14	0	0	*****								
300	20	0	0	*****								
305	24	1	0	*****								
310	20	0	0	*****								
315	6	0	0	*****								
320	21	0	0	*****								
325	16	0	0	*****								
330	17	0	0	*****								
335	26	1	0	*****								
340	21	0	0	*****								
345	29	1	0	*****								
350	28	1	0	*****								
355	22	0	0	*****								

NUMBER OF OBSERVATIONS = 4641

FIG. 17B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 32-DAY PERIOD DURING MARCH 25 THROUGH APRIL 26, 1970.

STATION NO. H-16 LAT. 49-9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 12.5/25/3/70 TO 17.25/26/4/70

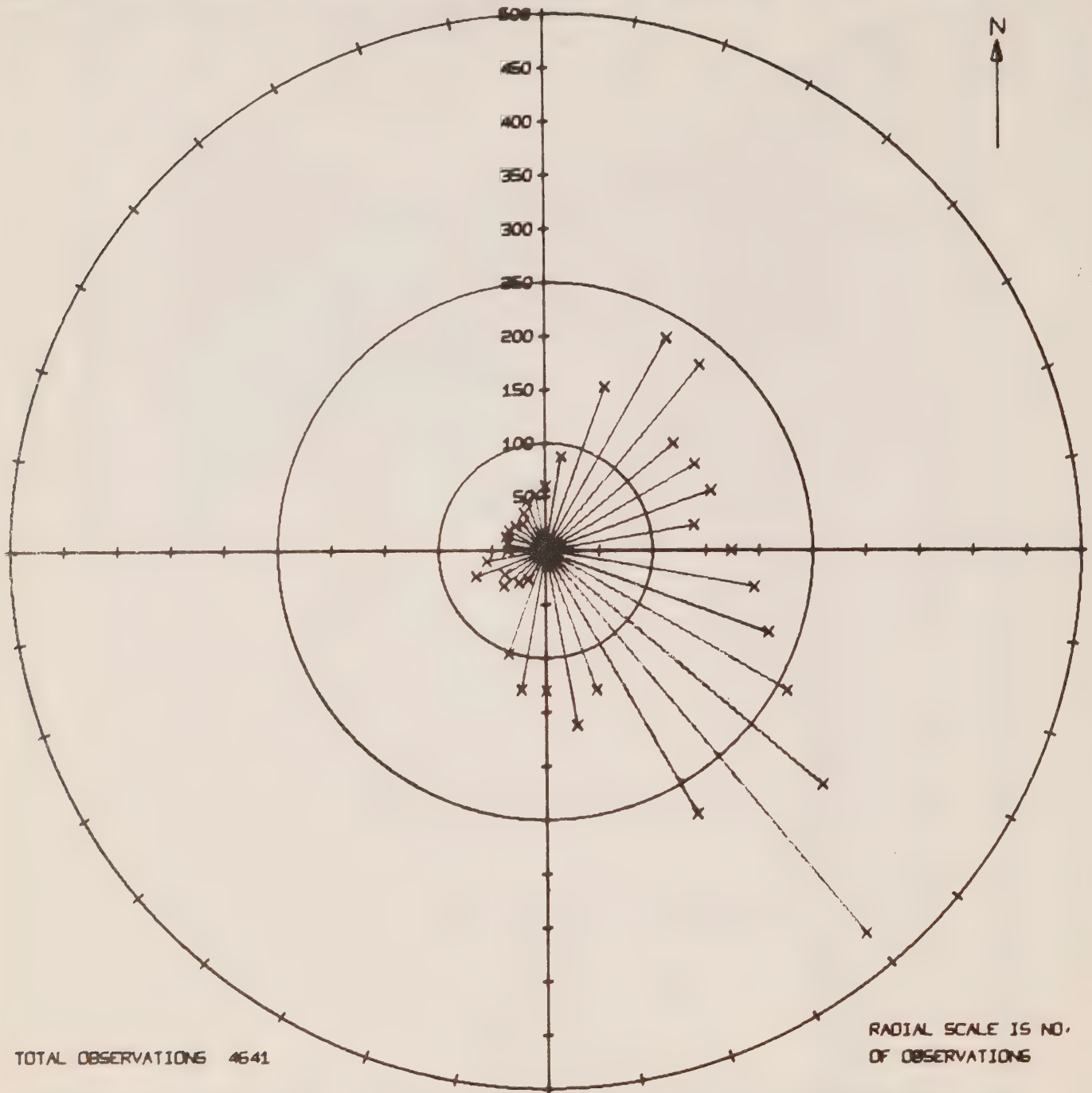


FIG. 17c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 32-DAY PERIOD DURING MARCH 25 THROUGH APRIL 26, 1970.

STATION NO. H-16 LAT. 49- 9.74 N LONG. 123-26.80 W
HISTOGRAM OF TEMPERATURE (DEG. CLNT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 12. 5/25/ 3/70 TO 17.25/26/ 4/70

TEMP.	FREQUENCY	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
NO.	PCT.	I	I	I	I	I	I	I	I	I	I
7.00	0	0	0	0	0	0	0	0	0	0	0
7.05	0	0	0	0	0	0	0	0	0	0	0
7.10	0	0	0	0	0	0	0	0	0	0	0
7.15	1	0	0	0	0	0	0	0	0	0	0
7.20	0	0	0	0	0	0	0	0	0	0	0
7.25	0	0	0	0	0	0	0	0	0	0	0
7.30	0	0	0	0	0	0	0	0	0	0	0
7.35	0	0	0	0	0	0	0	0	0	0	0
7.40	0	0	0	0	0	0	0	0	0	0	0
7.45	0	0	0	0	0	0	0	0	0	0	0
7.50	0	0	0	0	0	0	0	0	0	0	0
7.55	0	0	0	0	0	0	0	0	0	0	0
7.60	0	0	0	0	0	0	0	0	0	0	0
7.65	0	0	0	0	0	0	0	0	0	0	0
7.70	0	0	0	0	0	0	0	0	0	0	0
7.75	1	0	0	0	0	0	0	0	0	0	0
7.80	0	0	0	0	0	0	0	0	0	0	0
7.85	2	0	0	0	0	0	0	0	0	0	0
7.90	481	10	0	0	0	0	0	0	0	0	0
7.95	2174	47	0	0	0	0	0	0	0	0	0
8.00	1295	28	0	0	0	0	0	0	0	0	0
8.05	420	9	0	0	0	0	0	0	0	0	0
8.10	101	2	0	0	0	0	0	0	0	0	0
8.15	77	2	0	0	0	0	0	0	0	0	0
8.20	10	0	0	0	0	0	0	0	0	0	0
8.25	14	0	0	0	0	0	0	0	0	0	0
8.30	2	0	0	0	0	0	0	0	0	0	0
8.35	0	0	0	0	0	0	0	0	0	0	0
8.40	3	0	0	0	0	0	0	0	0	0	0
8.45	4	0	0	0	0	0	0	0	0	0	0
8.50	2	0	0	0	0	0	0	0	0	0	0
8.55	2	0	0	0	0	0	0	0	0	0	0
8.60	3	0	0	0	0	0	0	0	0	0	0
8.65	3	0	0	0	0	0	0	0	0	0	0
8.70	0	0	0	0	0	0	0	0	0	0	0
8.75	0	0	0	0	0	0	0	0	0	0	0
8.80	0	0	0	0	0	0	0	0	0	0	0
8.85	2	0	0	0	0	0	0	0	0	0	0
8.90	12	0	0	0	0	0	0	0	0	0	0
8.95	1	0	0	0	0	0	0	0	0	0	0
9.00	1	0	0	0	0	0	0	0	0	0	0
9.05	2	0	0	0	0	0	0	0	0	0	0
9.10	4	0	0	0	0	0	0	0	0	0	0
9.15	0	0	0	0	0	0	0	0	0	0	0
9.20	2	0	0	0	0	0	0	0	0	0	0
9.25	2	0	0	0	0	0	0	0	0	0	0
9.30	1	0	0	0	0	0	0	0	0	0	0
9.35	0	0	0	0	0	0	0	0	0	0	0
9.40	0	0	0	0	0	0	0	0	0	0	0
9.45	1	0	0	0	0	0	0	0	0	0	0
9.50	0	0	0	0	0	0	0	0	0	0	0
9.55	0	0	0	0	0	0	0	0	0	0	0
9.60	0	0	0	0	0	0	0	0	0	0	0
9.65	0	0	0	0	0	0	0	0	0	0	0
9.70	8	0	0	0	0	0	0	0	0	0	0
9.75	1	0	0	0	0	0	0	0	0	0	0
9.80	0	0	0	0	0	0	0	0	0	0	0
9.85	0	0	0	0	0	0	0	0	0	0	0
9.90	0	0	0	0	0	0	0	0	0	0	0
9.95	1	0	0	0	0	0	0	0	0	0	0
10.00	0	0	0	0	0	0	0	0	0	0	0
10.05	1	0	0	0	0	0	0	0	0	0	0
10.10	0	0	0	0	0	0	0	0	0	0	0
10.15	0	0	0	0	0	0	0	0	0	0	0
10.20	0	0	0	0	0	0	0	0	0	0	0
10.25	1	0	0	0	0	0	0	0	0	0	0
10.30	0	0	0	0	0	0	0	0	0	0	0
10.35	0	0	0	0	0	0	0	0	0	0	0
10.40	0	0	0	0	0	0	0	0	0	0	0
10.45	1	0	0	0	0	0	0	0	0	0	0
10.50	0	0	0	0	0	0	0	0	0	0	0
10.55	0	0	0	0	0	0	0	0	0	0	0
10.60	0	0	0	0	0	0	0	0	0	0	0
10.65	0	0	0	0	0	0	0	0	0	0	0
10.70	0	0	0	0	0	0	0	0	0	0	0
10.75	0	0	0	0	0	0	0	0	0	0	0
10.80	0	0	0	0	0	0	0	0	0	0	0
10.85	0	0	0	0	0	0	0	0	0	0	0
10.90	0	0	0	0	0	0	0	0	0	0	0
10.95	0	0	0	0	0	0	0	0	0	0	0
11.00	0	0	0	0	0	0	0	0	0	0	0
11.05	0	0	0	0	0	0	0	0	0	0	0
11.10	0	0	0	0	0	0	0	0	0	0	0
11.15	0	0	0	0	0	0	0	0	0	0	0
11.20	0	0	0	0	0	0	0	0	0	0	0
11.25	0	0	0	0	0	0	0	0	0	0	0
11.30	0	0	0	0	0	0	0	0	0	0	0
11.35	0	0	0	0	0	0	0	0	0	0	0
11.40	0	0	0	0	0	0	0	0	0	0	0
11.45	0	0	0	0	0	0	0	0	0	0	0
11.50	0	0	0	0	0	0	0	0	0	0	0
11.55	0	0	0	0	0	0	0	0	0	0	0
11.60	0	0	0	0	0	0	0	0	0	0	0
11.65	0	0	0	0	0	0	0	0	0	0	0
11.70	0	0	0	0	0	0	0	0	0	0	0
11.75	0	0	0	0	0	0	0	0	0	0	0
11.80	0	0	0	0	0	0	0	0	0	0	0
11.85	0	0	0	0	0	0	0	0	0	0	0
11.90	0	0	0	0	0	0	0	0	0	0	0
11.95	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 11.95 = 1

NUMBER OF OBSERVATIONS = 4641

MEAN TEMP = 7.99 DEG. C.

FIG. 17b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 32-DAY PERIOD DURING MARCH 25 THROUGH APRIL 26, 1970.

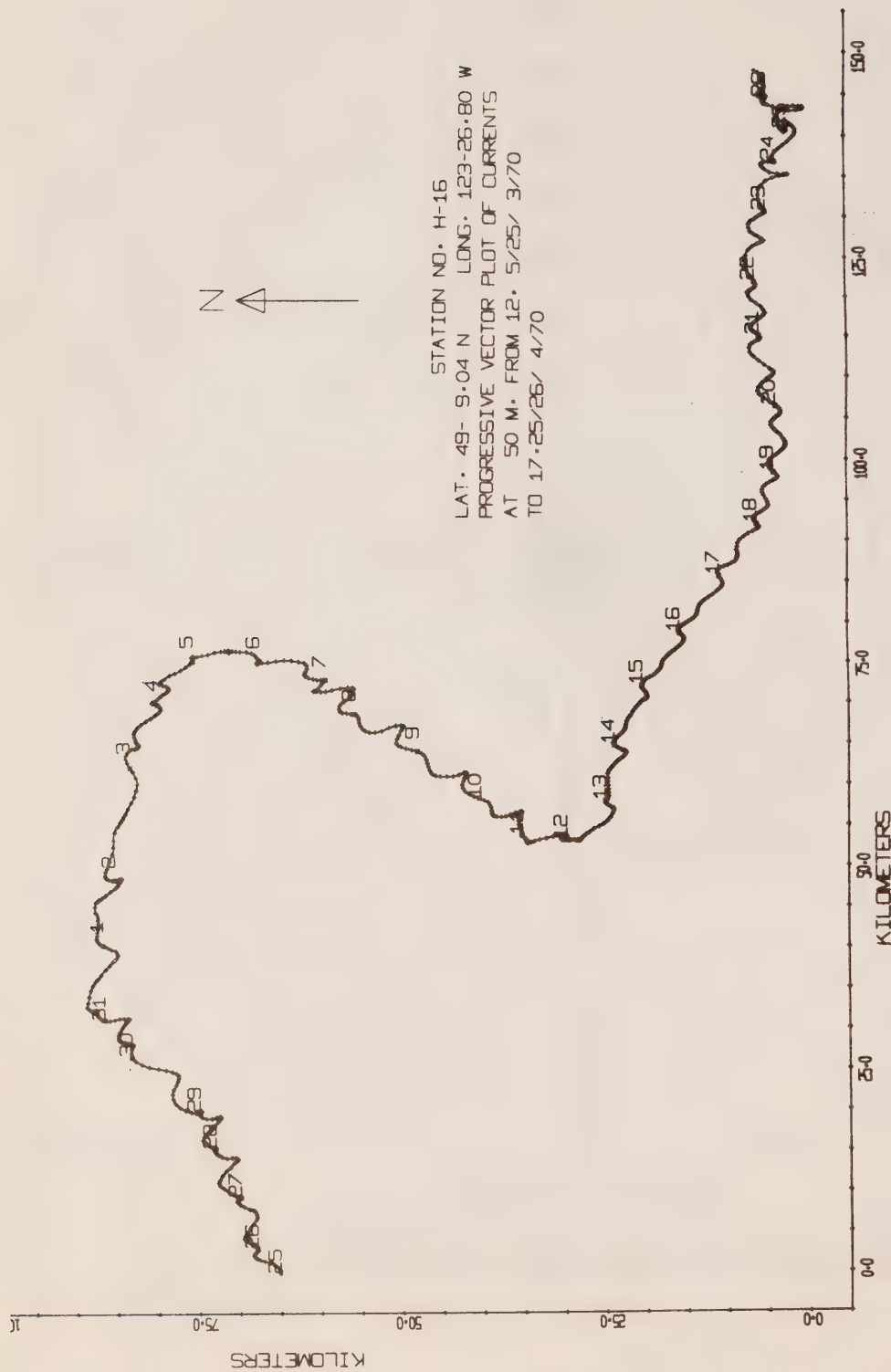


Fig. 17e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 32-day period during March 25 through April 26, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion of the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. 4-16 LAT. 49- 9.54 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 12.43/23/ 4/70 TO 12.19/10/ 6/70

SPEED	FREQUENCY	100	200	300	400	500	600	700	800	900	1000
NO.	PCT.	I	I	I	I	I	I	I	I	I	I
0	1	0	0	0	0	0	0	0	0	0	0
10	1	0	0	0	0	0	0	0	0	0	0
20	1	0	0	0	0	0	0	0	0	0	0
30	1	0	0	0	0	0	0	0	0	0	0
40	1	0	0	0	0	0	0	0	0	0	0
50	2	0	0	0	0	0	0	0	0	0	0
60	102	0	0	0	0	0	0	0	0	0	0
70	175	0	0	0	0	0	0	0	0	0	0
80	366	0	0	0	0	0	0	0	0	0	0
90	252	0	0	0	0	0	0	0	0	0	0
100	300	0	0	0	0	0	0	0	0	0	0
110	389	0	0	0	0	0	0	0	0	0	0
120	414	0	0	0	0	0	0	0	0	0	0
130	501	0	0	0	0	0	0	0	0	0	0
140	424	0	0	0	0	0	0	0	0	0	0
150	639	0	0	0	0	0	0	0	0	0	0
160	370	0	0	0	0	0	0	0	0	0	0
170	299	0	0	0	0	0	0	0	0	0	0
180	360	0	0	0	0	0	0	0	0	0	0
190	108	0	0	0	0	0	0	0	0	0	0
200	266	0	0	0	0	0	0	0	0	0	0
210	119	0	0	0	0	0	0	0	0	0	0
220	153	0	0	0	0	0	0	0	0	0	0
230	24	0	0	0	0	0	0	0	0	0	0
240	65	0	0	0	0	0	0	0	0	0	0
250	2	0	0	0	0	0	0	0	0	0	0
260	54	0	0	0	0	0	0	0	0	0	0
270	57	0	0	0	0	0	0	0	0	0	0
280	46	0	0	0	0	0	0	0	0	0	0
290	34	0	0	0	0	0	0	0	0	0	0
300	25	0	0	0	0	0	0	0	0	0	0
310	22	0	0	0	0	0	0	0	0	0	0
320	27	0	0	0	0	0	0	0	0	0	0
330	12	0	0	0	0	0	0	0	0	0	0
340	13	0	0	0	0	0	0	0	0	0	0
350	3	0	0	0	0	0	0	0	0	0	0
360	3	0	0	0	0	0	0	0	0	0	0
370	0	0	0	0	0	0	0	0	0	0	0
380	0	0	0	0	0	0	0	0	0	0	0
390	0	0	0	0	0	0	0	0	0	0	0
400	0	0	0	0	0	0	0	0	0	0	0
410	0	0	0	0	0	0	0	0	0	0	0
420	0	0	0	0	0	0	0	0	0	0	0
430	0	0	0	0	0	0	0	0	0	0	0
440	0	0	0	0	0	0	0	0	0	0	0
450	0	0	0	0	0	0	0	0	0	0	0
460	0	0	0	0	0	0	0	0	0	0	0
470	0	0	0	0	0	0	0	0	0	0	0
480	0	0	0	0	0	0	0	0	0	0	0
490	0	0	0	0	0	0	0	0	0	0	0
500	0	0	0	0	0	0	0	0	0	0	0
510	0	0	0	0	0	0	0	0	0	0	0
520	0	0	0	0	0	0	0	0	0	0	0
530	0	0	0	0	0	0	0	0	0	0	0
540	0	0	0	0	0	0	0	0	0	0	0
550	0	0	0	0	0	0	0	0	0	0	0
560	0	0	0	0	0	0	0	0	0	0	0
570	0	0	0	0	0	0	0	0	0	0	0
580	0	0	0	0	0	0	0	0	0	0	0
590	0	0	0	0	0	0	0	0	0	0	0
600	0	0	0	0	0	0	0	0	0	0	0
610	1	0	0	0	0	0	0	0	0	0	0
620	0	0	0	0	0	0	0	0	0	0	0
630	1	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 630 = 0

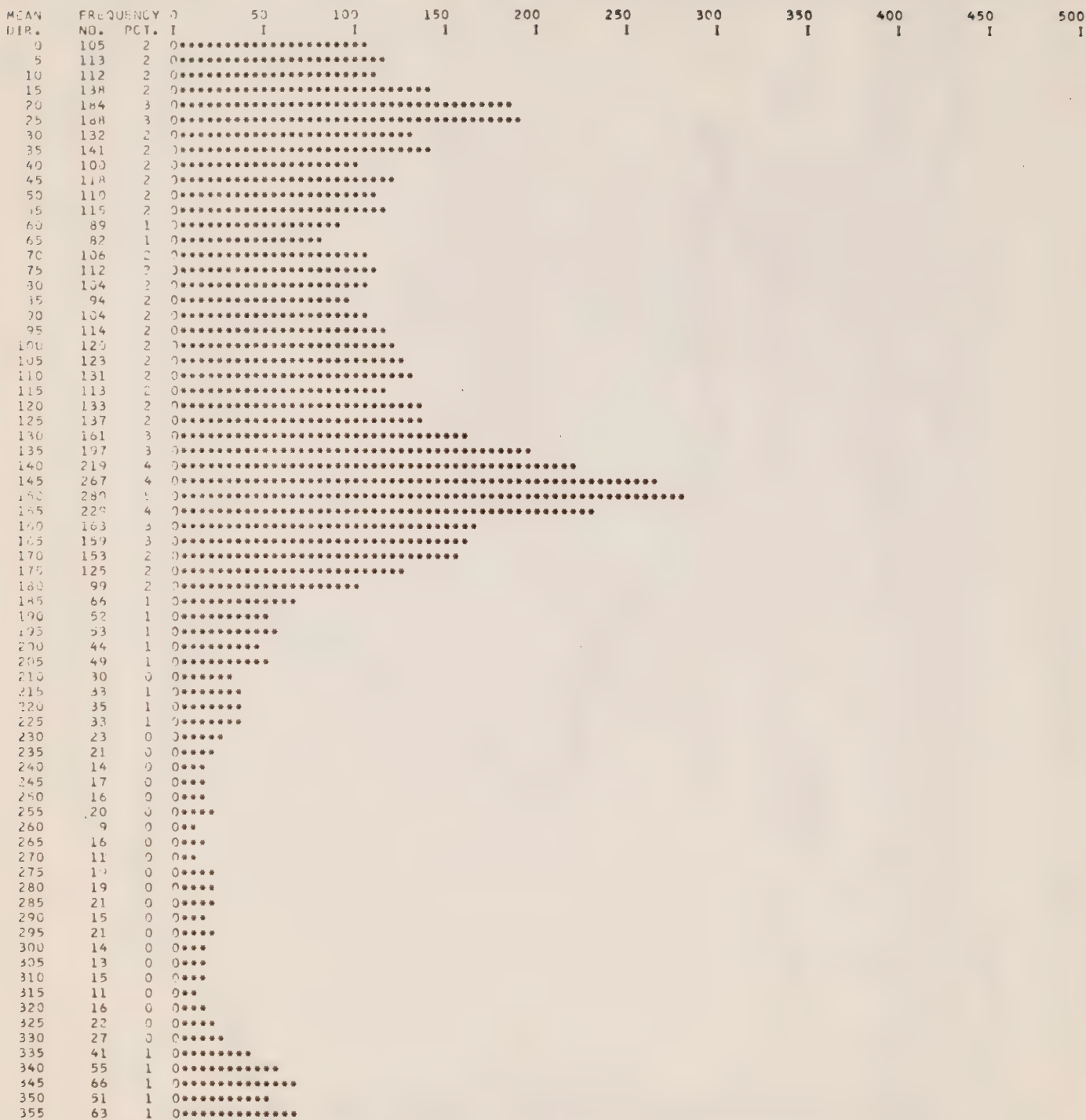
NUMBER OF OBSERVATIONS = 6201

MEAN SPEED = 149 MM/SEC

FIG. 18A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING APRIL 28 THROUGH JUNE 10, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 10.48/28/ 4/70 TO 12.19/10/ 6/70



NUMBER OF OBSERVATIONS = 6201

FIG. 18B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING APRIL 28 THROUGH JUNE 10, 1970.

STATION NO. H-16 LAT. 49° 9.04' N LONG. 123° 26.80' W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 10.48/28/ 4/70 TO 12.19/10/ 6/70

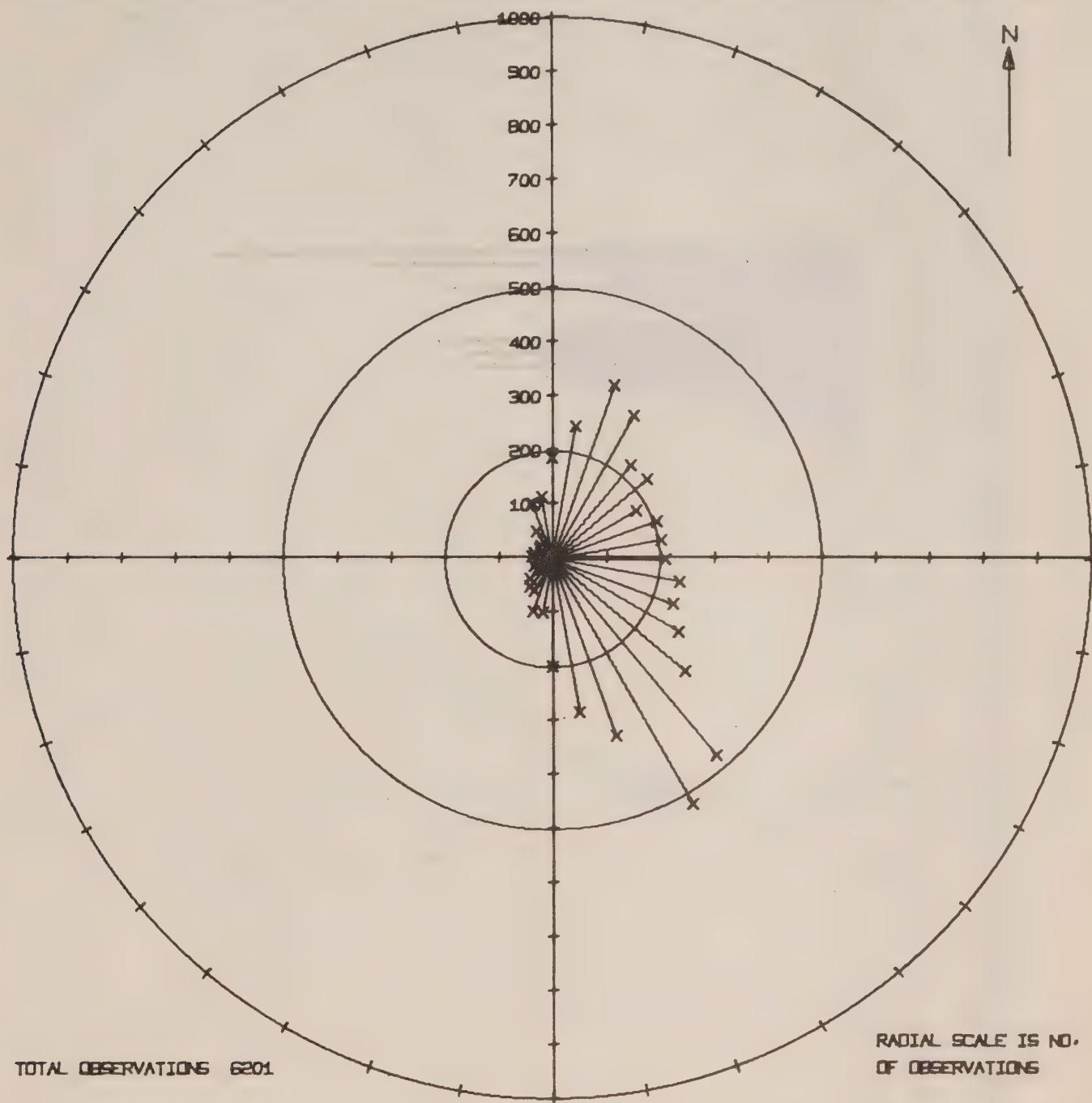


FIG. 18c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING APRIL 28 THROUGH JUNE 10, 1970.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 10.48/28/ 4/70 TO 12.19/10/ 6/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
7.30	0	0 0										
7.35	0	0 0										
7.40	0	0 0										
7.45	0	0 0										
7.50	0	0 0										
7.55	0	0 0										
7.60	0	0 0										
7.65	0	0 0										
7.70	0	0 0										
7.75	0	0 0										
7.80	0	0 0										
7.85	0	0 0										
7.90	0	0 0										
7.95	144	2 0	0	0	0	0	0	0	0	0	0	0
8.00	327	13 0	0	0	0	0	0	0	0	0	0	0
8.05	633	10 0	0	0	0	0	0	0	0	0	0	0
8.10	305	5 0	0	0	0	0	0	0	0	0	0	0
8.15	525	8 0	0	0	0	0	0	0	0	0	0	0
8.20	283	5 0	0	0	0	0	0	0	0	0	0	0
8.25	198	3 0	0	0	0	0	0	0	0	0	0	0
8.30	372	6 0	0	0	0	0	0	0	0	0	0	0
8.35	544	9 0	0	0	0	0	0	0	0	0	0	0
8.40	504	8 0	0	0	0	0	0	0	0	0	0	0
8.45	490	8 0	0	0	0	0	0	0	0	0	0	0
8.50	406	7 0	0	0	0	0	0	0	0	0	0	0
8.55	295	5 0	0	0	0	0	0	0	0	0	0	0
8.60	189	3 0	0	0	0	0	0	0	0	0	0	0
8.65	160	3 0	0	0	0	0	0	0	0	0	0	0
8.70	44	1 0	0	0	0	0	0	0	0	0	0	0
8.75	25	0 0	0	0	0	0	0	0	0	0	0	0
8.80	22	0 0	0	0	0	0	0	0	0	0	0	0
8.85	38	1 0	0	0	0	0	0	0	0	0	0	0
8.90	42	1 0	0	0	0	0	0	0	0	0	0	0
8.95	8	0 0	0	0	0	0	0	0	0	0	0	0
9.00	1	0 0	0	0	0	0	0	0	0	0	0	0
9.05	6	0 0	0	0	0	0	0	0	0	0	0	0
9.10	5	0 0	0	0	0	0	0	0	0	0	0	0
9.15	1	0 0	0	0	0	0	0	0	0	0	0	0
9.20	5	0 0	0	0	0	0	0	0	0	0	0	0
9.25	16	0 0	0	0	0	0	0	0	0	0	0	0
9.30	41	1 0	0	0	0	0	0	0	0	0	0	0
9.35	15	0 0	0	0	0	0	0	0	0	0	0	0
9.40	12	0 0	0	0	0	0	0	0	0	0	0	0
9.45	4	0 0	0	0	0	0	0	0	0	0	0	0
9.50	3	0 0	0	0	0	0	0	0	0	0	0	0
9.55	2	0 0	0	0	0	0	0	0	0	0	0	0
9.60	1	0 0	0	0	0	0	0	0	0	0	0	0
9.65	1	0 0	0	0	0	0	0	0	0	0	0	0
9.70	18	0 0	0	0	0	0	0	0	0	0	0	0
9.75	0	0 0	0	0	0	0	0	0	0	0	0	0
9.80	2	0 0	0	0	0	0	0	0	0	0	0	0
9.85	2	0 0	0	0	0	0	0	0	0	0	0	0
9.90	1	0 0	0	0	0	0	0	0	0	0	0	0
9.95	0	0 0	0	0	0	0	0	0	0	0	0	0
10.00	1	0 0	0	0	0	0	0	0	0	0	0	0
10.05	0	0 0	0	0	0	0	0	0	0	0	0	0
10.10	0	0 0	0	0	0	0	0	0	0	0	0	0
10.15	0	0 0	0	0	0	0	0	0	0	0	0	0
10.20	0	0 0	0	0	0	0	0	0	0	0	0	0
10.25	0	0 0	0	0	0	0	0	0	0	0	0	0
10.30	0	0 0	0	0	0	0	0	0	0	0	0	0
10.35	0	0 0	0	0	0	0	0	0	0	0	0	0
10.40	0	0 0	0	0	0	0	0	0	0	0	0	0
10.45	0	0 0	0	0	0	0	0	0	0	0	0	0
10.50	1	0 0	0	0	0	0	0	0	0	0	0	0
10.55	1	0 0	0	0	0	0	0	0	0	0	0	0
10.60	0	0 0	0	0	0	0	0	0	0	0	0	0
10.65	1	0 0	0	0	0	0	0	0	0	0	0	0
10.70	1	0 0	0	0	0	0	0	0	0	0	0	0
10.75	0	0 0	0	0	0	0	0	0	0	0	0	0
10.80	1	0 0	0	0	0	0	0	0	0	0	0	0
10.85	0	0 0	0	0	0	0	0	0	0	0	0	0
10.90	0	0 0	0	0	0	0	0	0	0	0	0	0
10.95	0	0 0	0	0	0	0	0	0	0	0	0	0
11.00	0	0 0	0	0	0	0	0	0	0	0	0	0
11.05	0	0 0	0	0	0	0	0	0	0	0	0	0
11.10	0	0 0	0	0	0	0	0	0	0	0	0	0
11.15	0	0 0	0	0	0	0	0	0	0	0	0	0
11.20	0	0 0	0	0	0	0	0	0	0	0	0	0
11.25	0	0 0	0	0	0	0	0	0	0	0	0	0
11.30	0	0 0	0	0	0	0	0	0	0	0	0	0
11.35	0	0 0	0	0	0	0	0	0	0	0	0	0
11.40	0	0 0	0	0	0	0	0	0	0	0	0	0
11.45	0	0 0	0	0	0	0	0	0	0	0	0	0
11.50	0	0 0	0	0	0	0	0	0	0	0	0	0
11.55	0	0 0	0	0	0	0	0	0	0	0	0	0
11.60	0	0 0	0	0	0	0	0	0	0	0	0	0
11.65	0	0 0	0	0	0	0	0	0	0	0	0	0
11.70	0	0 0	0	0	0	0	0	0	0	0	0	0
11.75	0	0 0	0	0	0	0	0	0	0	0	0	0
11.80	0	0 0	0	0	0	0	0	0	0	0	0	0
11.85	0	0 0	0	0	0	0	0	0	0	0	0	0
11.90	0	0 0	0	0	0	0	0	0	0	0	0	0
11.95	1	0 0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 11.95 = 0

NUMBER OF OBSERVATIONS = 6201

MEAN TEMP = 8.31 DEG. C.

FIG. 18b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING APRIL 28 THROUGH JUNE 10, 1970.

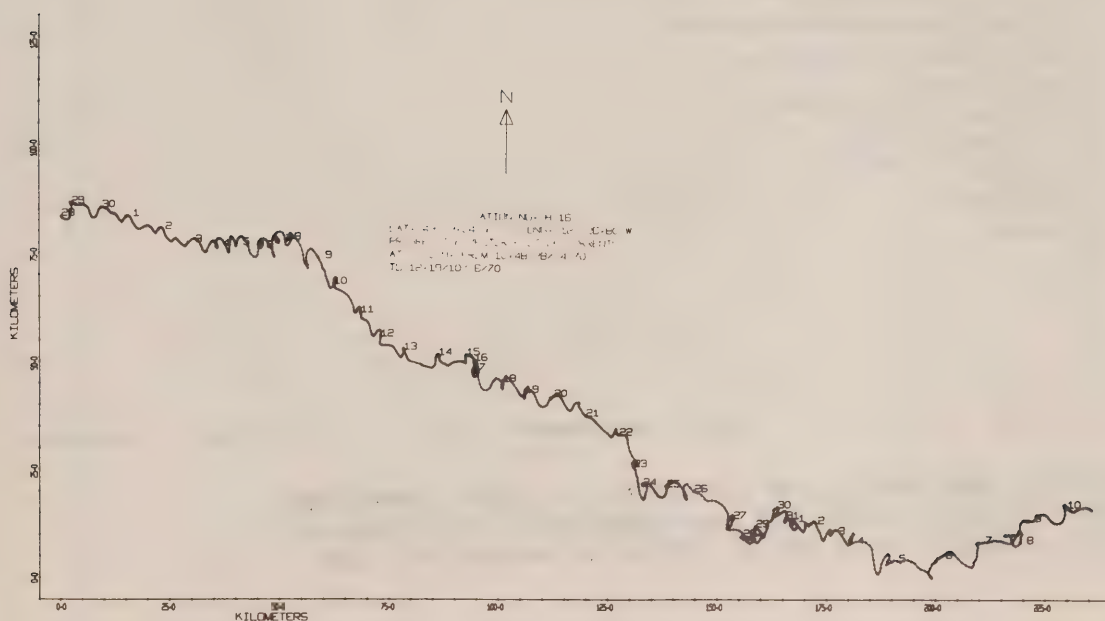


Fig. 18e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 43-day period during April 28 through June 10, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9. 1/14/ 6/70 TO 7.25/28/ 7/70

MEAN SPEED	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
			I	I	I	I	I	I	I	I	I	I	I
0	1	0	0										
10	0	0	0										
20	0	0	0										
30	1	0	0										
40	8	0	0*										
50	29	0	0***										
60	94	1	0*****										
70	97	2	0*****										
80	232	4	0*****										
90	230	4	0*****										
100	245	4	0*****										
110	431	7	0*****										
120	512	5	0*****										
130	554	9	0*****										
140	325	5	0*****										
150	487	8	0*****										
160	297	5	0*****										
170	276	4	0*****										
180	380	6	0*****										
190	232	4	0*****										
200	354	5	0*****										
210	204	3	0*****										
220	306	5	0*****										
230	199	3	0*****										
240	208	3	0*****										
250	250	4	0*****										
260	111	2	0*****										
270	129	2	0*****										
280	95	2	0*****										
290	97	2	0*****										
300	42	1	0****										
310	35	1	0****										
320	46	1	0*****										
330	14	0	0*										
340	15	0	0**										
350	5	0	0*										
360	6	0	0*										
370	2	0	0										

NUMBER OF SPEEDS GREATER THAN 370 = 0

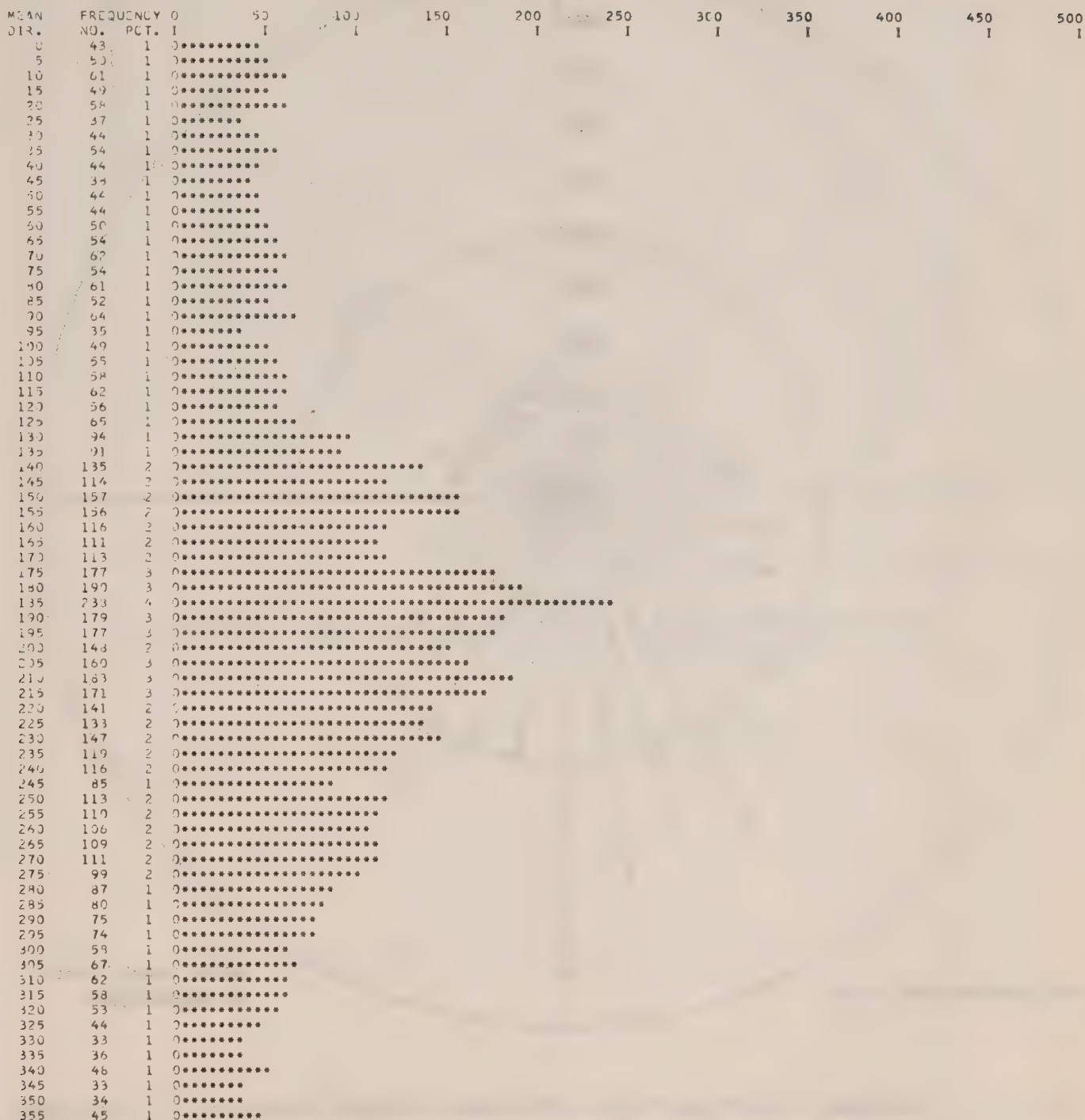
NUMBER OF OBSERVATIONS = 6329

MEAN SPEED = 168 MM/SEC

FIG. 19A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 44-DAY PERIOD DURING JUNE 14 THROUGH JULY 28, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N. LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9. 1/14/ 6/70 TO 7.25/28/ 7/70



NUMBER OF OBSERVATIONS = 6329

FIG. 19B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 44-DAY PERIOD DURING JUNE 14 THROUGH JULY 28, 1970.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 9. 1/14/ 6/70 TO 7.25/28/ 7/70

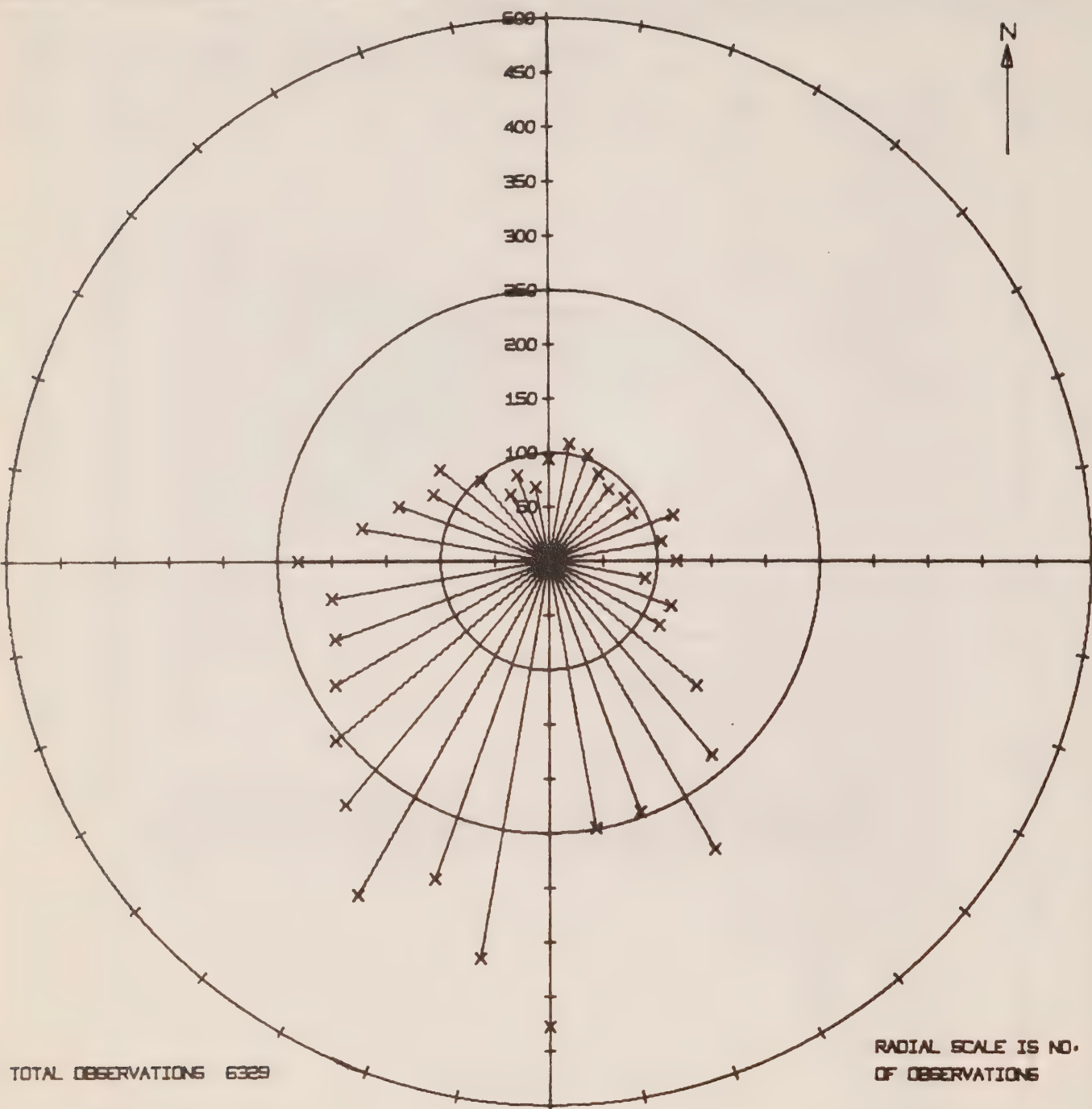


FIG. 19c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 44-DAY PERIOD DURING JUNE 14 THROUGH JULY 28, 1970.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 9. 1/14/ 6/70 TO 7.25/28/ 7/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
8.00	0	0										
8.05	0	0										
8.10	0	0										
8.15	0	0										
8.20	0	0										
8.25	0	0										
8.30	1	0										
8.35	46	1										
8.40	104	3										
8.45	122	4										
8.50	132	4										
8.55	154	5										
8.60	164	5										
8.65	212	6										
8.70	176	5										
8.75	189	6										
8.80	190	6										
8.85	181	6										
8.90	201	6										
8.95	221	7										
9.00	296	9										
9.05	282	8										
9.10	329	10										
9.15	503	15										
9.20	542	16										
9.25	543	16										
9.30	543	16										
9.35	448	13										
9.40	291	9										
9.45	166	5										
9.50	116	3										
9.55	68	2										
9.60	25	1										
9.65	20	1										
9.70	5	0										
9.75	7	0										

NUMBER OF TEMP. GREATER THAN 9.75 =

NUMBER OF OBSERVATIONS = 6329

MEAN TEMP = 9.06 DEG. C.

FIG. 19d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 44-DAY PERIOD DURING JUNE 14 THROUGH JULY 28, 1970.

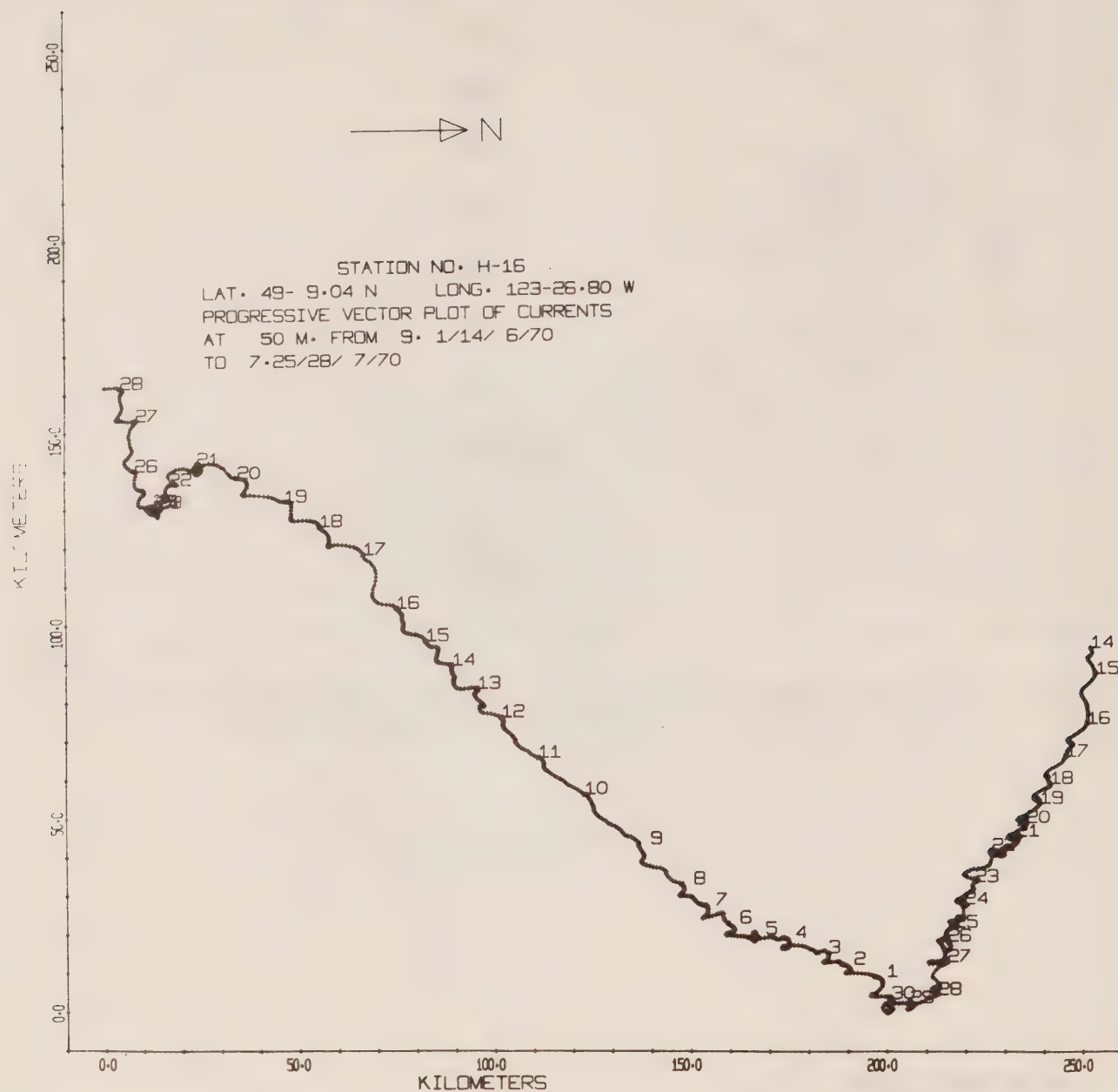


Fig. 19e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 44-day period during June 14 through July 28, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9.35/29/ 7/70 TO 17. 6/24/ 9/70

PLAN SPEED	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	1	0.01										
10	1	0.01										
20	1	0.01										
30	1	0.01										
40	2	0.02										
50	11	0.13										
60	79	0.94										
70	100	1.20										
80	207	2.47										
90	162	1.95										
100	215	2.58										
110	364	4.34										
120	325	3.91										
130	573	6.84										
140	437	5.22										
150	737	8.85										
160	534	6.38										
170	448	5.36										
180	601	7.18										
190	404	4.85										
200	624	7.48										
210	374	4.48										
220	453	5.41										
230	261	3.12										
240	227	2.73										
250	300	3.58										
260	178	2.13										
270	234	2.81										
280	114	1.37										
290	131	1.57										
300	66	0.79										
310	48	0.58										
320	38	0.46										
330	40	0.48										
340	37	0.44										
350	14	0.17										
360	24	0.29										
370	10	0.12										
380	11	0.13										
390	7	0.08										
400	1	0.01										

NUMBER OF SPEEDS GREATER THAN 400 = 0 NUMBER OF OBSERVATIONS = 8400 MEAN SPEED = 179 MM/SEC

FIG. 20A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 58-DAY PERIOD DURING JULY 28 THROUGH SEPTEMBER 24, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 9.35/28/ 7/70 TO 17. 6/24/ 9/70

MEAN DIP.	FREQUENCY NO.	PCT.	0 I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
0	102	1	0	*****									
5	111	1	0	*****									
10	125	1	0	*****									
15	126	2	0	*****									
20	149	2	0	*****									
25	155	2	0	*****									
30	162	2	0	*****									
35	173	2	0	*****									
40	201	2	0	*****									
45	163	2	0	*****									
50	173	2	0	*****									
55	136	2	0	*****									
60	178	2	0	*****									
65	127	2	0	*****									
70	154	2	0	*****									
75	156	2	0	*****									
80	120	1	0	*****									
85	145	2	0	*****									
90	154	2	0	*****									
95	155	2	0	*****									
100	147	2	0	*****									
105	151	2	0	*****									
110	145	2	0	*****									
115	125	1	0	*****									
120	144	2	0	*****									
125	179	2	0	*****									
130	126	1	0	*****									
135	204	2	0	*****									
140	214	3	0	*****									
145	173	2	0	*****									
150	202	2	0	*****									
155	241	3	0	*****									
160	210	3	0	*****									
165	143	2	0	*****									
170	167	2	0	*****									
175	171	2	0	*****									
180	171	2	0	*****									
185	153	2	0	*****									
190	155	2	0	*****									
195	154	2	0	*****									
200	132	2	0	*****									
205	97	1	0	*****									
210	84	1	0	*****									
215	79	1	0	*****									
220	75	1	0	*****									
225	71	1	0	*****									
230	59	1	0	*****									
235	54	1	0	*****									
240	77	1	0	*****									
245	67	1	0	*****									
250	47	1	0	*****									
255	56	1	0	*****									
260	50	1	0	*****									
265	47	1	0	*****									
270	39	1	0	*****									
275	41	0	0	*****									
280	46	1	0	*****									
285	44	1	0	*****									
290	47	1	0	*****									
295	45	1	0	*****									
300	40	0	0	*****									
305	41	0	0	*****									
310	41	0	0	*****									
315	52	1	0	*****									
320	48	1	0	*****									
325	58	1	0	*****									
330	53	1	0	*****									
335	52	1	0	*****									
340	53	1	0	*****									
345	40	1	0	*****									
350	71	1	0	*****									
355	78	1	0	*****									

NUMBER OF OBSERVATIONS = 8400

FIG. 20B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 58-DAY PERIOD DURING JULY 28 THROUGH SEPTEMBER 24, 1970.

STATION NO. H-16 LAT. 49-9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 9.35/28/ 7/70 TO 17. 6/24/ 9/70

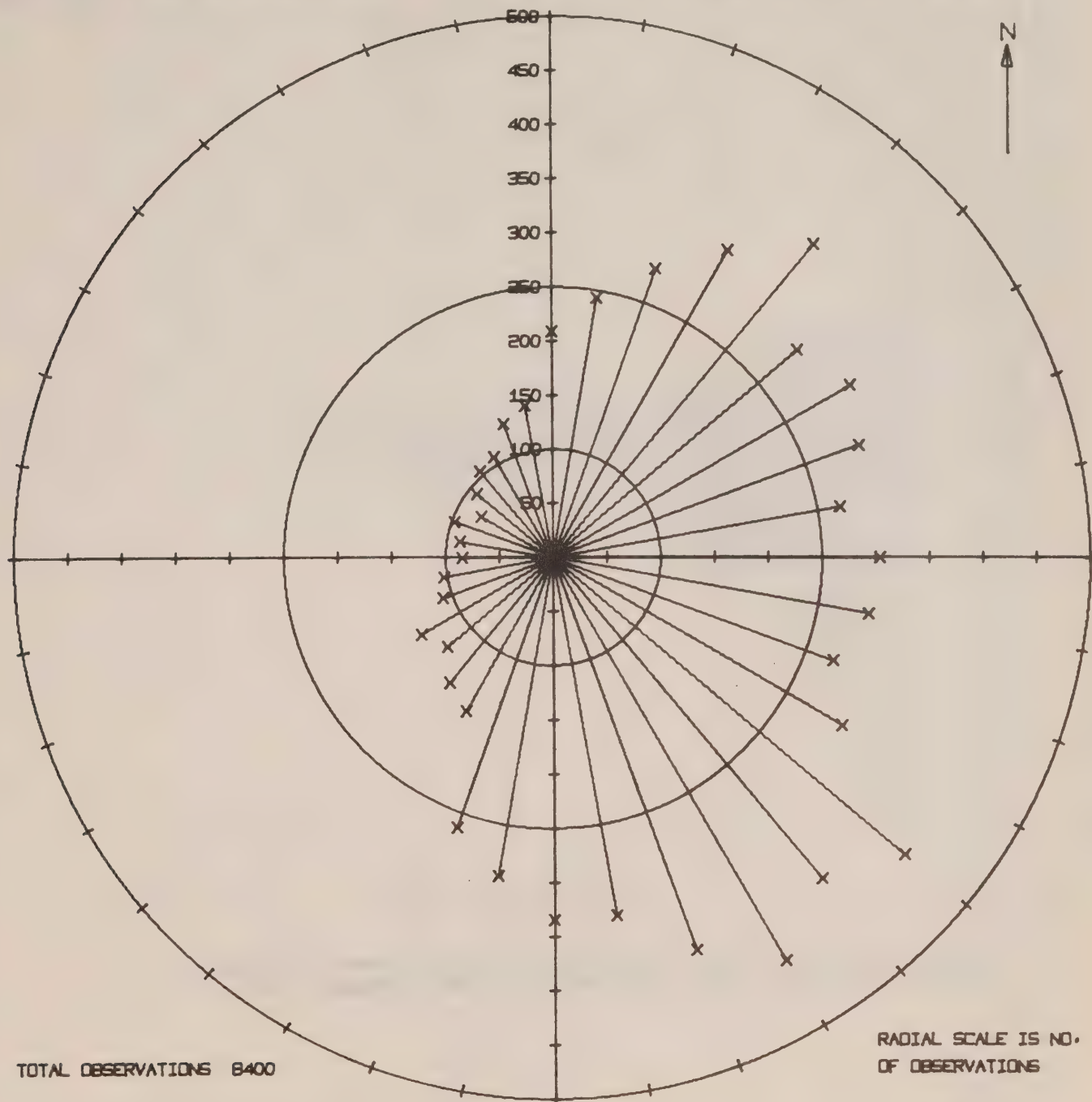


FIG. 20c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 58-DAY PERIOD DURING JULY 28 THROUGH SEPTEMBER 24, 1970.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 9.35/28/ 7/70 TO 17. 6/24/ 9/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
8.00	0	0										
8.05	0	0										
8.10	0	0										
8.15	0	0										
8.20	0	0										
8.25	0	0										
8.30	0	0										
8.35	0	0										
8.40	0	0										
8.45	0	0										
8.50	0	0										
8.55	0	0										
8.60	0	0										
8.65	0	0										
8.70	0	0										
8.75	0	0										
8.80	10	0	0*									
8.85	26	0	0***									
8.90	27	0	0**									
8.95	56	1	0*****									
9.00	125	1	0*****									
9.05	156	2	0*****									
9.10	183	2	0*****									
9.15	174	2	0*****									
9.20	270	3	0*****									
9.25	478	5	0*****									
9.30	536	7	0*****									
9.35	665	7	0*****									
9.40	599	7	0*****									
9.45	573	7	0*****									
9.50	564	7	0*****									
9.55	529	6	0*****									
9.60	378	5	0*****									
9.65	371	4	0*****									
9.70	346	4	0*****									
9.75	304	4	0*****									
9.80	217	3	0*****									
9.85	99	1	0*****									
9.90	145	2	0*****									
9.95	142	2	0*****									
10.00	139	2	0*****									
10.05	125	1	0*****									
10.10	111	1	0*****									
10.15	125	1	0*****									
10.20	127	2	0*****									
10.25	92	1	0*****									
10.30	59	1	0*****									
10.35	101	1	0*****									
10.40	101	1	0*****									
10.45	90	1	0*****									
10.50	78	1	0*****									
10.55	81	1	0*****									
10.60	81	1	0*****									
10.65	49	1	0*****									
10.70	12	0	0*									
10.75	1	0	0									

NUMBER OF TEMP. GREATER THAN 10.75° = 0

NUMBER OF OBSERVATIONS = 8400

MEAN TEMP = 9.59 DEG. C.

FIG. 20b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 58-DAY PERIOD DURING JULY 28 THROUGH SEPTEMBER 24, 1970.

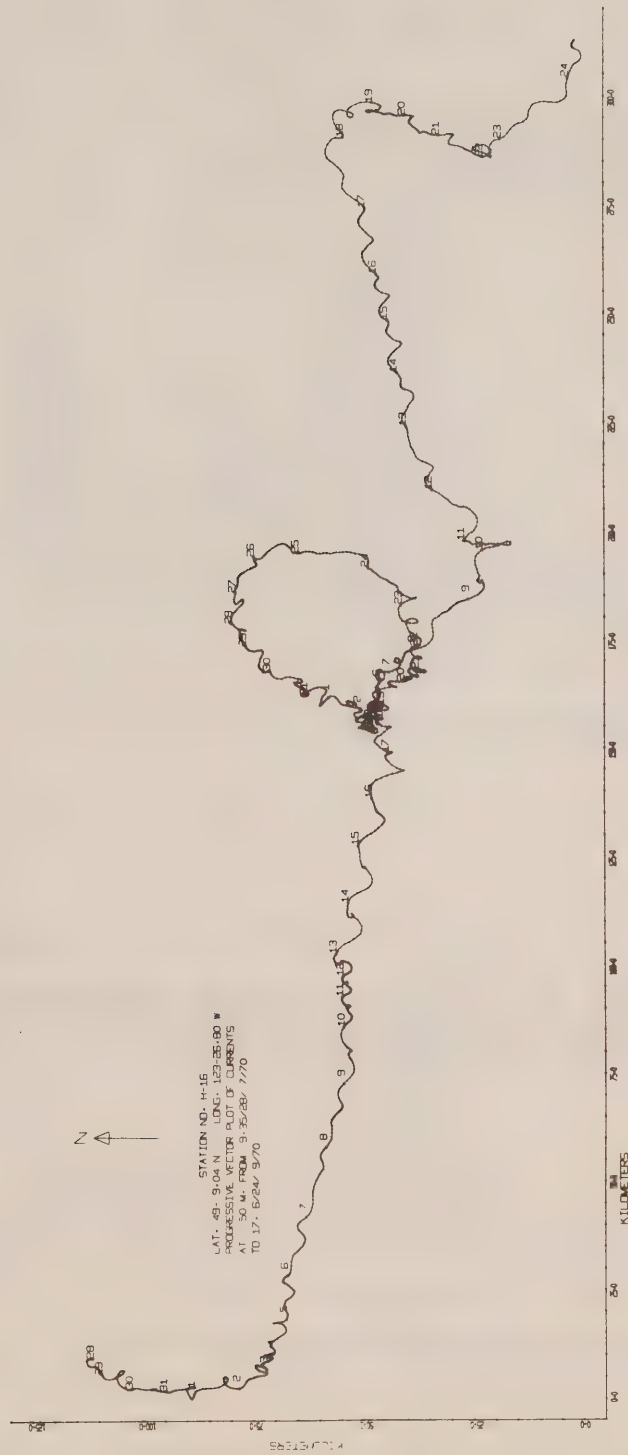


Fig. 20e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 58-day period during July 28 through September 24, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 9.25/16/ 4/69 TO 14.45/22/ 4/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	20	40	60	80	100	120	140	160	180	200
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	64	7	0	*****									
20	26	3	0	*****									
30	38	4	0	*****									
40	89	10	0	*****									
50	68	8	0	*****									
60	111	12	0	*****									
70	69	8	0	*****									
80	86	10	0	*****									
90	40	4	0	*****									
100	21	2	0	*****									
110	40	4	0	*****									
120	26	3	0	*****									
130	42	5	0	*****									
140	20	2	0	*****									
150	32	4	0	*****									
160	20	2	0	*****									
170	10	1	0	*****									
180	28	3	0	*****									
190	16	2	0	*****									
200	26	3	0	*****									
210	7	1	0	****									
220	6	1	0	***									
230	3	0	0	**									
240	0	0	0										
250	5	1	0	***									
260	0	0	0										
270	0	0	0										
280	0	0	0										
290	0	0	0										
300	0	0	0										
310	0	0	0										
320	0	0	0										
330	0	0	0										
340	0	0	0										
350	1	0	0	*									
360	1	0	0	*									
370	1	0	0	*									
380	0	0	0										
390	0	0	0										
400	0	0	0										
410	0	0	0										
420	0	0	0										
430	0	0	0										
440	0	0	0										
450	1	0	0	*									

NUMBER OF SPEEDS GREATER THAN 450 = 0 NUMBER OF OBSERVATIONS = 897 MEAN SPEED = 87 MM/SEC

FIG. 21a. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

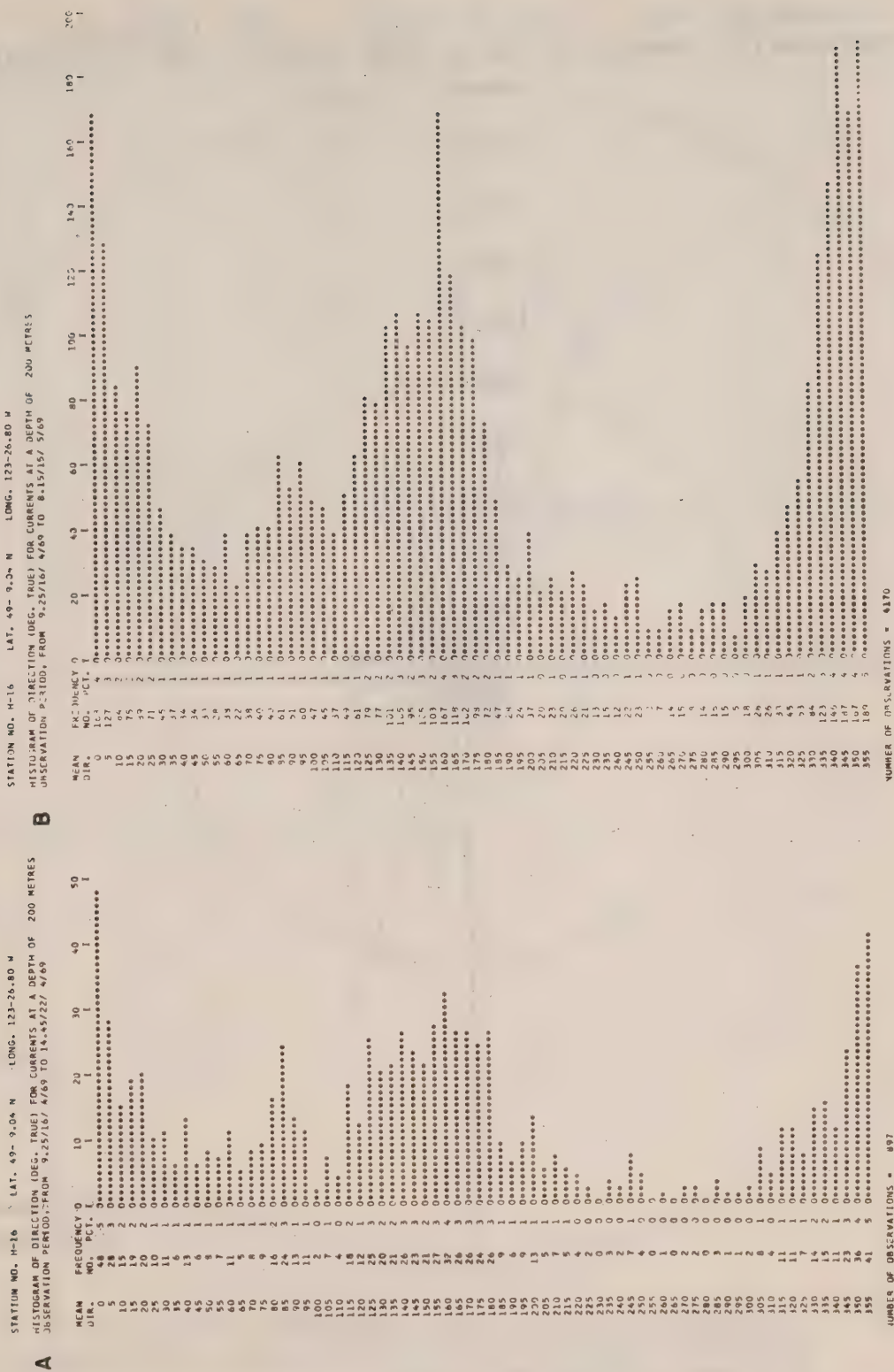


FIG. 21a. A. A HISTOGRAM OF DIRECTION (TRUE) WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969.
B. A HISTOGRAM OF DIRECTION (TRUE) WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 9-25/16/ 4/69 TO 8-15/15/ 5/69

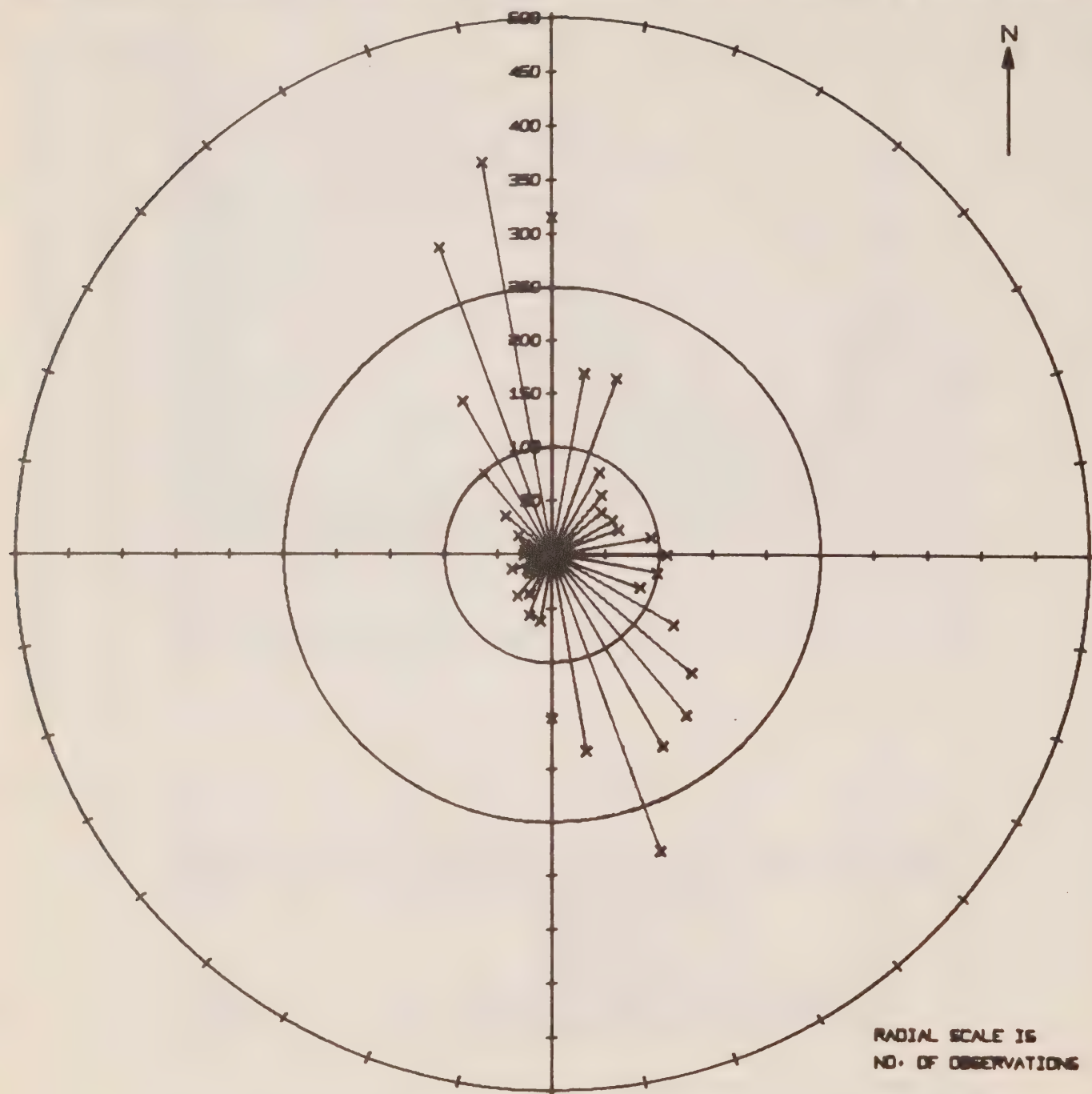


FIG. 21c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 9.25/16/ 4/69 TO 14.45/22/ 4/69

MEAN TEMP.	FREQUENCY NO.	PCT.	0 I	20 I	40 I	60 I	80 I	100 I	120 I	140 I	160 I	180 I	200 I
7.00	0	0	0										
7.05	0	0	0										
7.10	0	0	0										
7.15	0	0	0										
7.20	0	0	0										
7.25	0	0	0										
7.30	0	0	0										
7.35	0	0	0										
7.40	0	0	0										
7.45	0	0	0										
7.50	0	0	0										
7.55	0	0	0										
7.60	0	0	0										
7.65	1	0	0*										
7.70	1	0	0*										
7.75	9	1	0*****										
7.80	46	5	0*****										
7.85	79	9	0*****										
7.90	80	9	0*****										
7.95	104	12	0*****										
8.00	163	18	0*****										
8.05	124	14	0*****										
8.10	129	14	0*****										
8.15	51	6	0*****										
8.20	61	7	0*****										
8.25	36	4	0*****										
8.30	10	1	0*****										
8.35	3	0	0**										

NUMBER OF TEMP. GREATER THAN 8.35 = 0

NUMBER OF OBSERVATIONS = 897

MEAN TEMP = 8.02 DEG. C.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 9.25/16/ 4/69 TO 8.15/15/ 5/69

MEAN TEMP.	FREQUENCY NO.	PCT.	0 I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
7.00	0	0	0										
7.05	0	0	0										
7.10	0	0	0										
7.15	0	0	0										
7.20	0	0	0										
7.25	0	0	0										
7.30	0	0	0										
7.35	0	0	0										
7.40	3	0	0										
7.45	2	0	0										
7.50	1	0	0										
7.55	10	0	0*										
7.60	5	0	0*										
7.65	19	0	0**										
7.70	98	2	0*****										
7.75	147	4	0*****										
7.80	258	6	0*****										
7.85	412	10	0*****										
7.90	617	15	0*****										
7.95	604	14	0*****										
8.00	592	14	0*****										
8.05	543	13	0*****										
8.10	424	10	0*****										
8.15	178	4	0*****										
8.20	151	4	0*****										
8.25	75	2	0*****										
8.30	26	1	0***										
8.35	4	0	0										

NUMBER OF TEMP. GREATER THAN 8.35 = 0

NUMBER OF OBSERVATIONS = 4170

MEAN TEMP = 7.97 DEG. C.

FIG. 21d. A. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 6-DAY PERIOD DURING APRIL 16 THROUGH APRIL 22, 1969.
B. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

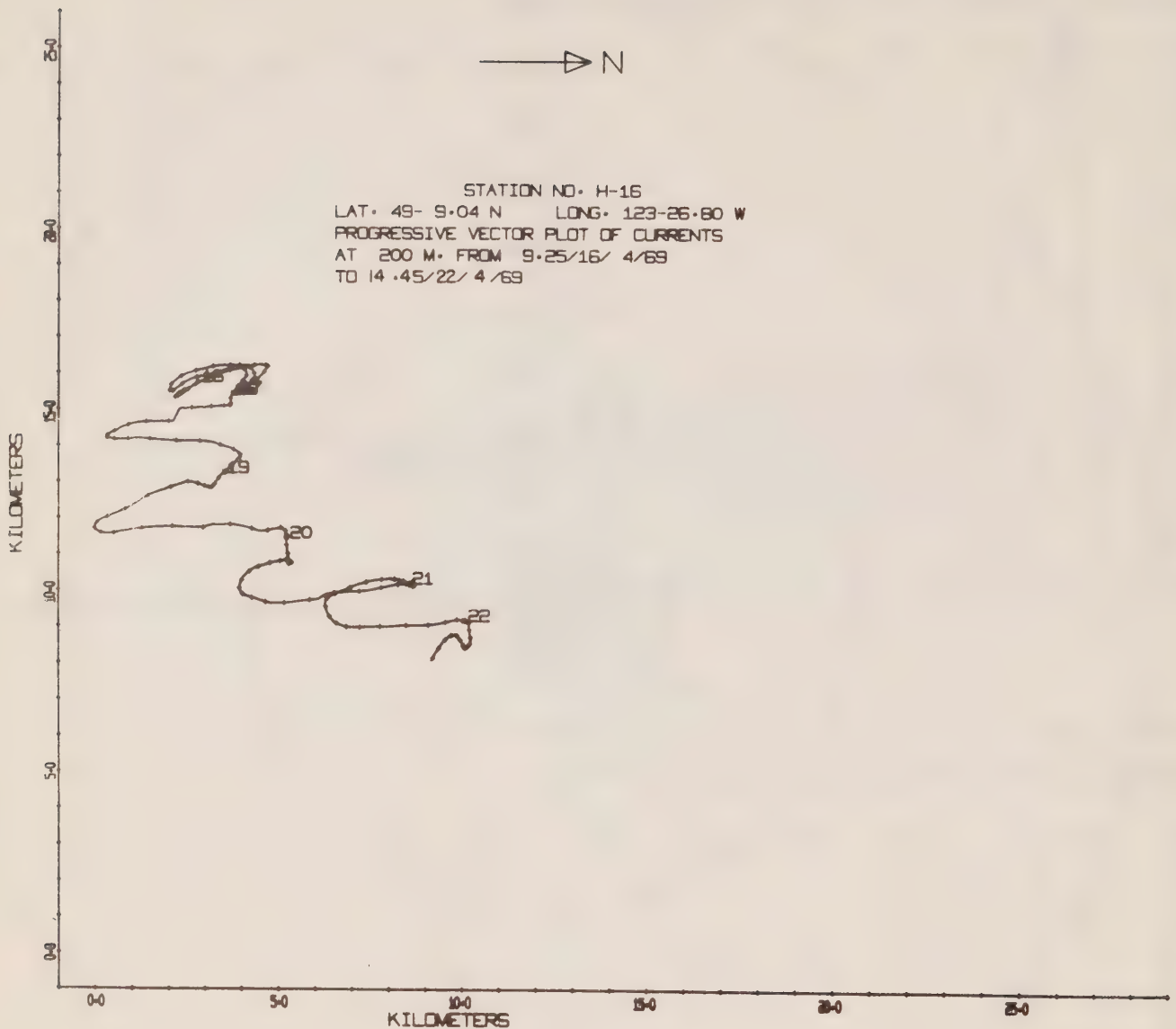


Fig. 21e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 6-day period during April 16 through April 22, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 10.34/15/ 5/69 TO 6.28/18/ 6/69

MEAN DIR.	F. NO.	FREQUENCY PCT.	0 I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I
0	191	4	0	0	0	0	0	0	0	0	0
5	88	2	0	0	0	0	0	0	0	0	0
10	77	2	0	0	0	0	0	0	0	0	0
15	77	2	0	0	0	0	0	0	0	0	0
20	77	2	0	0	0	0	0	0	0	0	0
25	67	1	0	0	0	0	0	0	0	0	0
30	57	1	0	0	0	0	0	0	0	0	0
35	57	1	0	0	0	0	0	0	0	0	0
40	38	1	0	0	0	0	0	0	0	0	0
45	33	1	0	0	0	0	0	0	0	0	0
50	29	1	0	0	0	0	0	0	0	0	0
55	31	1	0	0	0	0	0	0	0	0	0
60	25	1	0	0	0	0	0	0	0	0	0
65	4	0	0	0	0	0	0	0	0	0	0
70	34	1	0	0	0	0	0	0	0	0	0
75	27	1	0	0	0	0	0	0	0	0	0
80	29	1	0	0	0	0	0	0	0	0	0
85	21	0	0	0	0	0	0	0	0	0	0
90	30	1	0	0	0	0	0	0	0	0	0
95	29	1	0	0	0	0	0	0	0	0	0
100	43	1	0	0	0	0	0	0	0	0	0
105	32	1	0	0	0	0	0	0	0	0	0
110	49	1	0	0	0	0	0	0	0	0	0
115	36	1	0	0	0	0	0	0	0	0	0
120	36	1	0	0	0	0	0	0	0	0	0
125	45	1	0	0	0	0	0	0	0	0	0
130	59	1	0	0	0	0	0	0	0	0	0
135	80	2	0	0	0	0	0	0	0	0	0
140	34	2	0	0	0	0	0	0	0	0	0
145	108	2	0	0	0	0	0	0	0	0	0
150	143	3	0	0	0	0	0	0	0	0	0
155	159	3	0	0	0	0	0	0	0	0	0
160	164	3	0	0	0	0	0	0	0	0	0
165	167	3	0	0	0	0	0	0	0	0	0
170	125	3	0	0	0	0	0	0	0	0	0
175	..	..	0	0	0	0	0	0	0	0	0
180	75	2	0	0	0	0	0	0	0	0	0
185	97	2	0	0	0	0	0	0	0	0	0
190	74	2	0	0	0	0	0	0	0	0	0
195	54	1	0	0	0	0	0	0	0	0	0
200	35	1	0	0	0	0	0	0	0	0	0
205	41	1	0	0	0	0	0	0	0	0	0
210	47	1	0	0	0	0	0	0	0	0	0
215	59	1	0	0	0	0	0	0	0	0	0
220	43	1	0	0	0	0	0	0	0	0	0
225	44	1	0	0	0	0	0	0	0	0	0
230	35	1	0	0	0	0	0	0	0	0	0
235	35	1	0	0	0	0	0	0	0	0	0
240	36	1	0	0	0	0	0	0	0	0	0
245	38	1	0	0	0	0	0	0	0	0	0
250	44	1	0	0	0	0	0	0	0	0	0
255	45	1	0	0	0	0	0	0	0	0	0
260	34	1	0	0	0	0	0	0	0	0	0
265	42	1	0	0	0	0	0	0	0	0	0
270	27	1	0	0	0	0	0	0	0	0	0
275	43	1	0	0	0	0	0	0	0	0	0
280	32	1	0	0	0	0	0	0	0	0	0
285	..	..	0	0	0	0	0	0	0	0	0
290	32	1	0	0	0	0	0	0	0	0	0
295	38	1	0	0	0	0	0	0	0	0	0
300	45	1	0	0	0	0	0	0	0	0	0
305	23	0	0	0	0	0	0	0	0	0	0
310	26	1	0	0	0	0	0	0	0	0	0
315	35	1	0	0	0	0	0	0	0	0	0
320	47	1	0	0	0	0	0	0	0	0	0
325	57	1	0	0	0	0	0	0	0	0	0
330	88	2	0	0	0	0	0	0	0	0	0
335	108	2	0	0	0	0	0	0	0	0	0
340	145	3	0	0	0	0	0	0	0	0	0
345	228	5	0	0	0	0	0	0	0	0	0
350	285	6	0	0	0	0	0	0	0	0	0
355	245	5	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 4872

FIG. 22A. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969.

STATION NO. H-16

LAT. 49- 9-04 N

LONG. 123-55-50 W

DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 10-30/15/ 5/00 TO 6-00/18/ 6/00

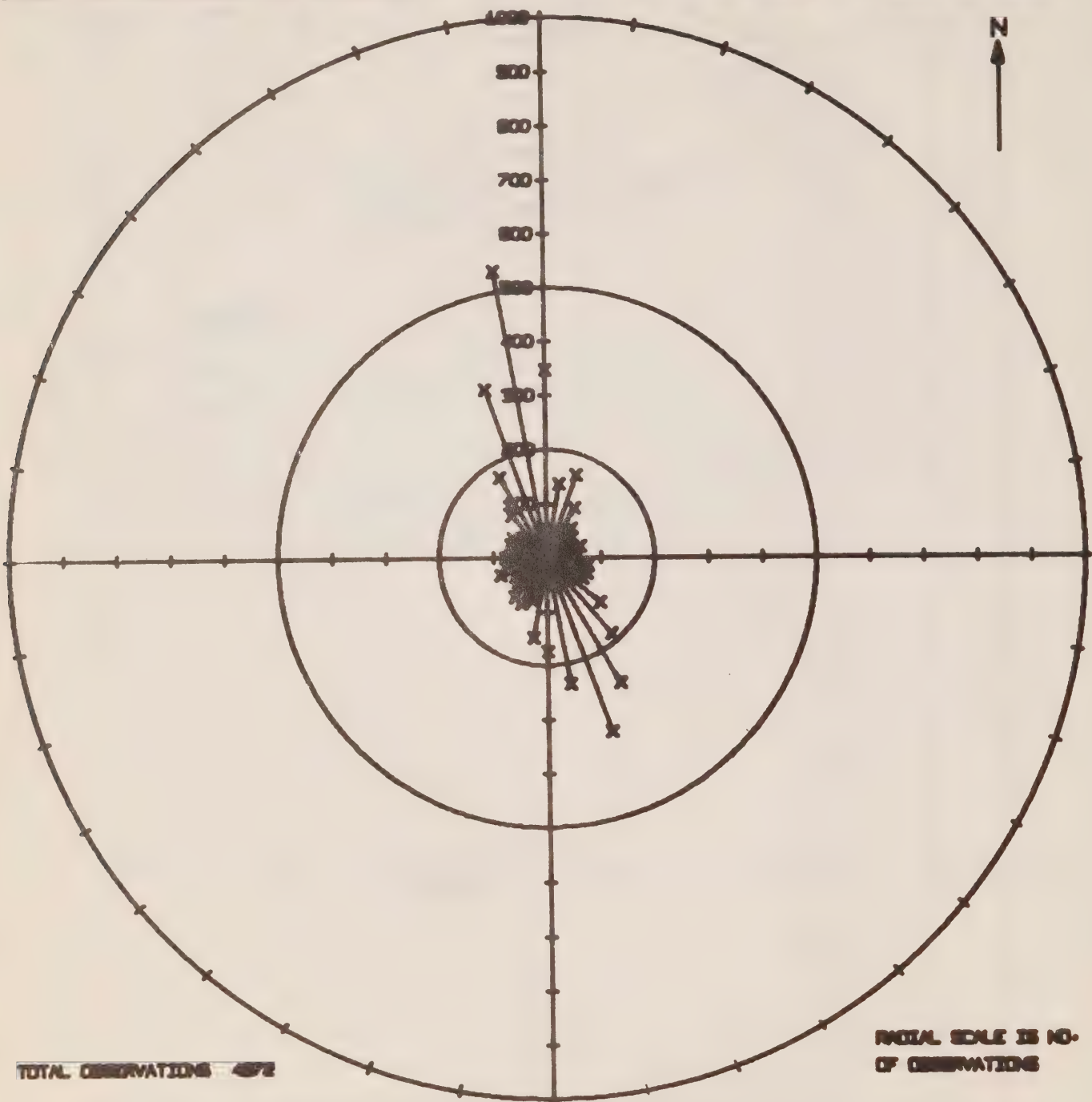


FIG. 22B.

A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 16 THROUGH JUNE 18, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 10.38/15/ 5/69 TO 6.28/18/ 6/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I	1600 I	1800 I	2000 I
7.00	0	0										
7.05	0	0										
7.10	0	0										
7.15	0	0										
7.20	0	0										
7.25	0	0										
7.30	0	0										
7.35	0	0										
7.40	1	0										
7.45	1	0										
7.50	0	0										
7.55	0	0										
7.60	0	0										
7.65	3	0										
7.70	4	0										
7.75	12	0										
7.80	30	1										
7.85	63	1										
7.90	263	5										
7.95	423	9										
8.00	342	7										
8.05	192	4										
8.10	191	4										
8.15	171	4										
8.20	320	7										
8.25	1117	23										
8.30	900	18										
8.35	473	10										
8.40	158	3										
8.45	84	2										
8.50	51	1										
8.55	39	1										
8.60	20	0										
8.65	12	0										

NUMBER OF TEMP. GREATER THAN 8.65 = 0

NUMBER OF OBSERVATIONS = 4872

MEAN TEMP = 8.19 DEG. C.

FIG. 22c. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 10.49/18/ 6/69 TO 10. 2/10/ 7/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
0	0	0	0	I	I	I	I	I	I	I	I	I	I
10	192	6	0*****										
20	95	3	0*****										
30	136	4	0*****										
40	273	9	0*****										
50	154	5	0*****										
60	305	10	0*****										
70	201	6	0*****										
80	251	8	0*****										
90	172	5	0*****										
100	152	5	0*****										
110	205	6	0*****										
120	118	4	0*****										
130	150	5	0*****										
140	91	3	0*****										
150	131	4	0*****										
160	61	2	0*****										
170	34	1	0*****										
180	61	2	0*****										
190	36	1	0*****										
200	46	1	0*****										
210	17	1	0***										
220	35	1	0*****										
230	17	1	0***										
240	16	1	0***										
250	17	1	0***										
260	10	0	0**										
270	22	1	0****										
280	17	1	0***										
290	19	1	0****										
300	10	0	0**										
310	15	0	0***										
320	25	1	0*****										
330	14	0	0***										
340	15	0	0***										
350	9	0	0**										
360	9	0	0**										
370	2	0	0										
380	2	0	0										
390	4	0	0*										
400	2	0	0										
410	7	0	0*										
420	7	0	0*										
430	4	0	0*										

NUMBER OF SPEEDS GREATER THAN 430 = 0

NUMBER OF OBSERVATIONS = 3159

MEAN SPEED = 103 MM/SEC

FIG. 23A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 10.49/18/ 6/69 TO 10. 2/10/ 7/69

MEAN DIR.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400
0	91	3	0*****	I		I	I	I	I	I	I
5	66	2	0*****								
10	73	2	0*****								
15	54	2	0*****								
20	50	2	0*****								
25	35	1	0*****								
30	28	1	0*****								
35	18	1	0****								
40	20	1	0****								
45	11	0	0**								
50	19	1	0****								
55	17	1	0***								
60	19	1	0****								
65	17	1	0***								
70	17	1	0***								
75	18	1	0****								
80	11	0	0**								
85	1	1	0****								
90	21	1	0****								
95	16	1	0***								
100	17	1	0***								
105	14	0	0***								
110	20	1	0****								
115	17	1	0***								
120	24	1	0*****								
125	18	1	0****								
130	38	1	0*****								
135	37	1	0*****								
140	48	2	0*****								
145	55	2	0*****								
150	63	2	0*****								
155	94	3	0*****								
160	90	3	0*****								
165	124	4	0*****								
170	108	3	0*****								
175	108	3	0*****								
180	79	3	0*****								
185	51	2	0*****								
190	35	1	0*****								
195	21	1	0*****								
200	30	1	0*****								
205	22	1	0****								
210	22	1	0****								
215	14	0	0***								
220	17	1	0***								
225	21	1	0****								
230	24	1	0*****								
235	11	0	0**								
240	16	1	0***								
245	10	0	0**								
250	14	0	0***								
255	15	0	0***								
260	15	0	0***								
265	9	0	0**								
270	9	0	0**								
275	25	1	0*****								
280	20	1	0****								
285	26	1	0*****								
290	25	1	0*****								
295	15	0	0***								
300	28	1	0*****								
305	11	1	0*****								
310	34	1	0*****								
315	40	1	0*****								
320	51	2	0*****								
325	55	2	0*****								
330	104	3	0*****								
335	131	4	0*****								
340	153	5	0*****								
345	205	6	0*****								
350	160	5	0*****								
355	115	4	0*****								

NUMBER OF OBSERVATIONS = 3159

FIG. 23B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

STATION NO. H-16

LAT. 49-9.04 N

LONG. 123-25.80 W

DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 10.4/18/ 6/69 TO 10.2/10/ 7/69

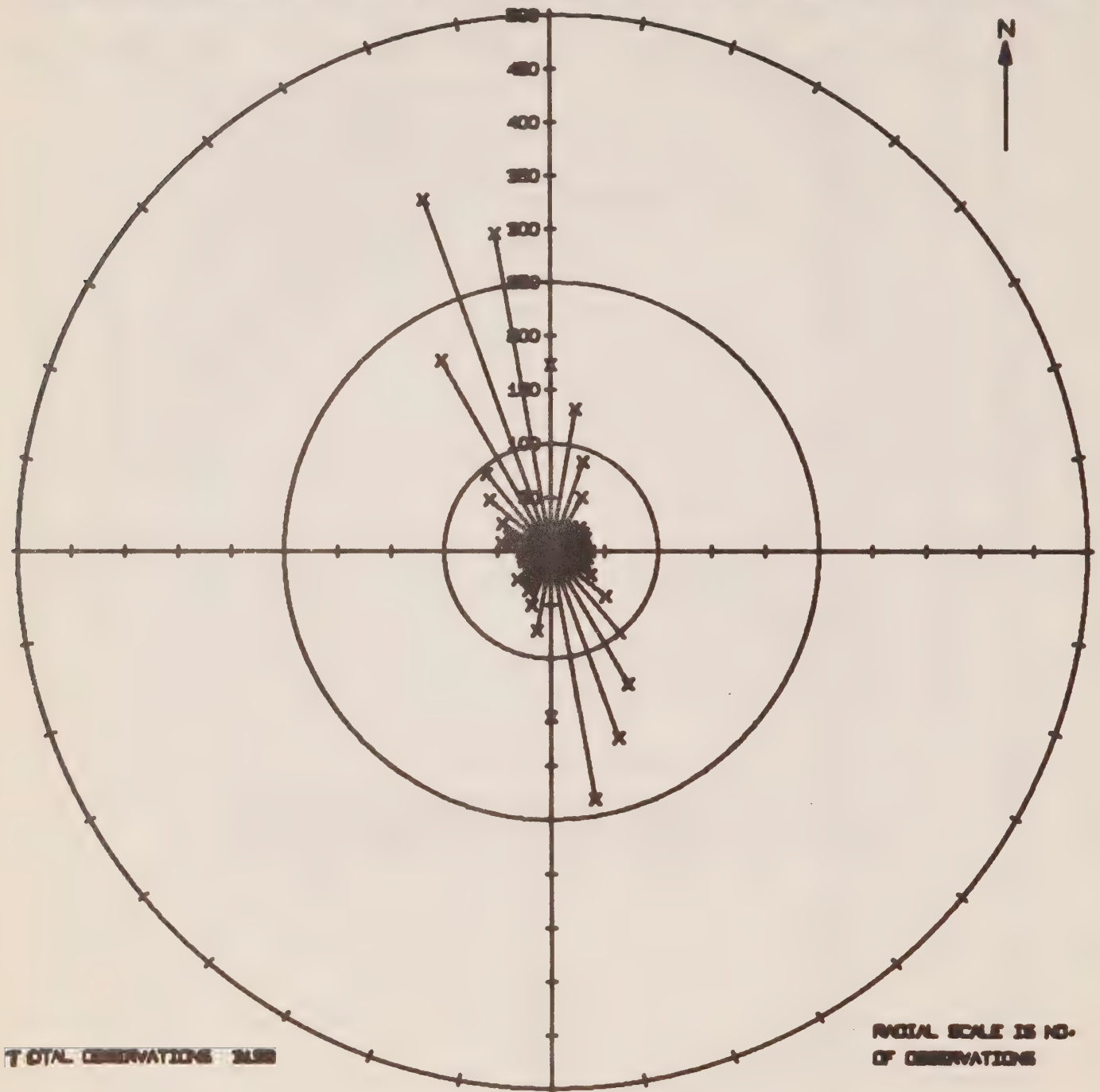


FIG. 23c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

STATION NO. H-16 LAT. 49- 9.34 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 10.49/18/ 6/69 TO 10. 2/10/ 7/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
8.00	0	0	0									
8.05	0	0	0									
8.10	0	0	0									
8.15	0	0	0									
8.20	27	1	0***									
8.25	540	17	0*****									
8.30	417	13	0*****									
8.35	217	7	0*****									
8.40	126	4	0*****									
8.45	129	4	0*****									
8.50	203	7	0*****									
8.55	178	6	0*****									
8.60	151	4	0*****									
8.65	77	3	0*****									
8.70	168	5	0*****									
8.75	212	7	0*****									
8.80	111	4	0*****									
8.85	110	3	0*****									
8.90	201	6	0*****									
8.95	96	3	0*****									
9.00	58	2	0*****									
9.05	42	1	0****									
9.10	32	1	0***									
9.15	17	1	0**									
9.20	13	0	0*									
9.25	15	0	0**									
9.30	5	0	0*									
9.35	15	0	0**									
9.40	1	0	0									

NUMBER OF TEMP. GREATER THAN 9.40 = 0

NUMBER OF OBSERVATIONS = 3159

MEAN TEMP = 8.55 DEG. C.

FIG. 23D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

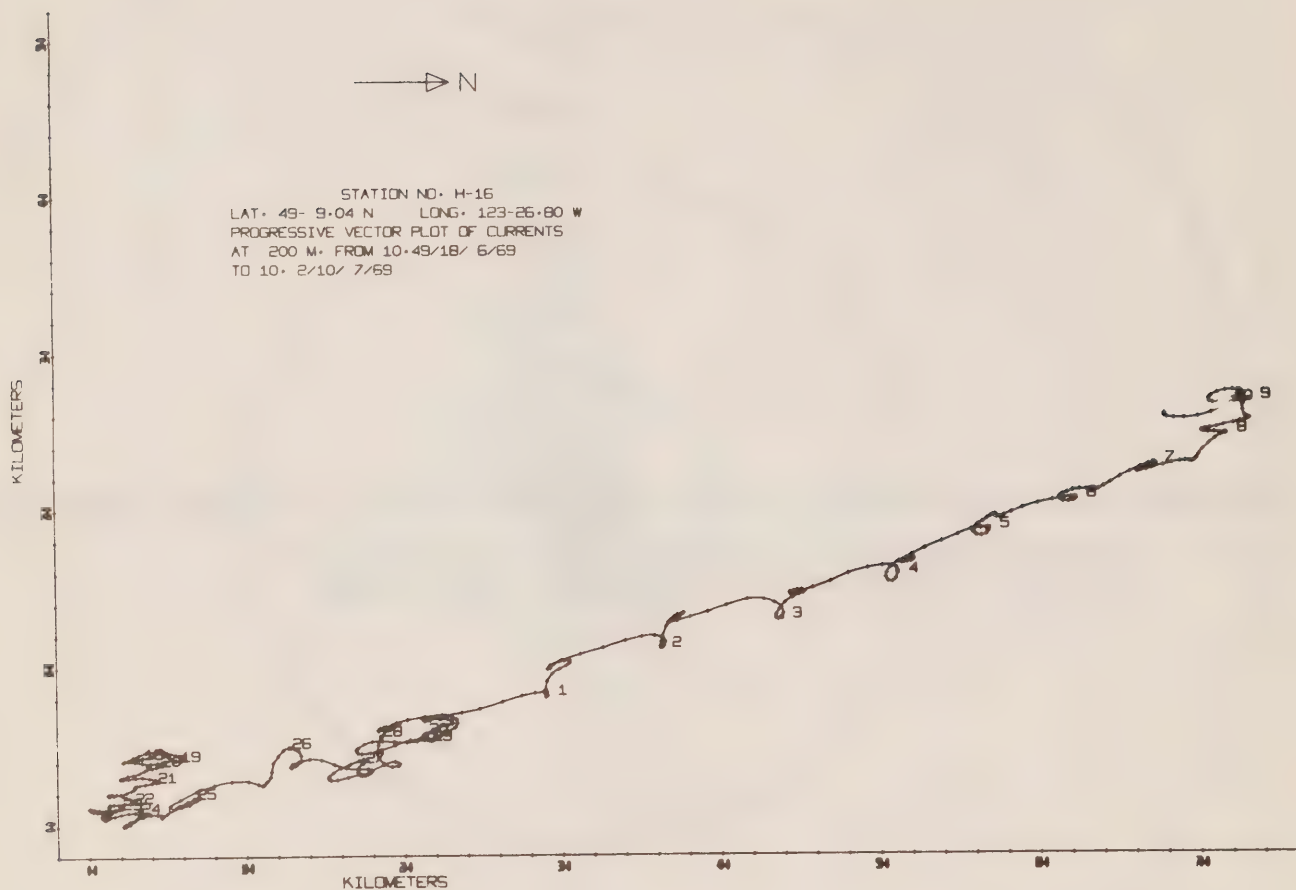


Fig. 23e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 22-day period during June 18 through July 10, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.34 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 13. 2/10/ 7/69 TO 16.28/22/ 8/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
0	0	0	0										
10	330	6	0	0	0	0	0	0	0	0	0	0	0
20	123	2	0	0	0	0	0	0	0	0	0	0	0
30	233	4	0	0	0	0	0	0	0	0	0	0	0
40	473	8	0	0	0	0	0	0	0	0	0	0	0
50	373	6	0	0	0	0	0	0	0	0	0	0	0
60	514	9	0	0	0	0	0	0	0	0	0	0	0
70	379	6	0	0	0	0	0	0	0	0	0	0	0
80	496	8	0	0	0	0	0	0	0	0	0	0	0
90	329	5	0	0	0	0	0	0	0	0	0	0	0
100	293	5	0	0	0	0	0	0	0	0	0	0	0
110	327	5	0	0	0	0	0	0	0	0	0	0	0
120	189	3	0	0	0	0	0	0	0	0	0	0	0
130	271	4	0	0	0	0	0	0	0	0	0	0	0
140	176	3	0	0	0	0	0	0	0	0	0	0	0
150	298	5	0	0	0	0	0	0	0	0	0	0	0
160	157	3	0	0	0	0	0	0	0	0	0	0	0
170	143	2	0	0	0	0	0	0	0	0	0	0	0
180	212	3	0	0	0	0	0	0	0	0	0	0	0
190	125	2	0	0	0	0	0	0	0	0	0	0	0
200	175	3	0	0	0	0	0	0	0	0	0	0	0
210	73	1	0	0	0	0	0	0	0	0	0	0	0
220	83	1	0	0	0	0	0	0	0	0	0	0	0
230	43	1	0	0	0	0	0	0	0	0	0	0	0
240	43	1	0	0	0	0	0	0	0	0	0	0	0
250	69	1	0	0	0	0	0	0	0	0	0	0	0
260	24	0	0	0	0	0	0	0	0	0	0	0	0
270	51	1	0	0	0	0	0	0	0	0	0	0	0
280	17	0	0	0	0	0	0	0	0	0	0	0	0
290	15	0	0	0	0	0	0	0	0	0	0	0	0
300	6	0	0	0	0	0	0	0	0	0	0	0	0
310	6	0	0	0	0	0	0	0	0	0	0	0	0
320	11	0	0	0	0	0	0	0	0	0	0	0	0
330	4	0	0	0	0	0	0	0	0	0	0	0	0
340	6	0	0	0	0	0	0	0	0	0	0	0	0
350	2	0	0	0	0	0	0	0	0	0	0	0	0
360	8	0	0	0	0	0	0	0	0	0	0	0	0
370	7	0	0	0	0	0	0	0	0	0	0	0	0
380	1	0	0	0	0	0	0	0	0	0	0	0	0
390	2	0	0	0	0	0	0	0	0	0	0	0	0
400	1	0	0	0	0	0	0	0	0	0	0	0	0
410	3	0	0	0	0	0	0	0	0	0	0	0	0
420	1	0	0	0	0	0	0	0	0	0	0	0	0
430	1	0	0	0	0	0	0	0	0	0	0	0	0
440	2	0	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 440 = 0

NUMBER OF OBSERVATIONS = 6224

MEAN SPEED = 103 MM/SEC

FIG. 24A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING JULY 10 THROUGH AUGUST 22, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 13. 2/10/ 7/69 TO 16.26/22/ 8/69

MEAN DIR.	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350	400
0	207	3	0	0	0	0	0	0	0	0	0
5	166	3	0	0	0	0	0	0	0	0	0
10	117	2	0	0	0	0	0	0	0	0	0
15	71	1	0	0	0	0	0	0	0	0	0
20	79	1	0	0	0	0	0	0	0	0	0
25	68	1	0	0	0	0	0	0	0	0	0
30	62	1	0	0	0	0	0	0	0	0	0
35	40	1	0	0	0	0	0	0	0	0	0
40	36	1	0	0	0	0	0	0	0	0	0
45	38	1	0	0	0	0	0	0	0	0	0
50	31	0	0	0	0	0	0	0	0	0	0
55	37	1	0	0	0	0	0	0	0	0	0
60	25	0	0	0	0	0	0	0	0	0	0
65	32	1	0	0	0	0	0	0	0	0	0
70	51	1	0	0	0	0	0	0	0	0	0
75	36	1	0	0	0	0	0	0	0	0	0
80	40	1	0	0	0	0	0	0	0	0	0
85	47	1	0	0	0	0	0	0	0	0	0
90	44	1	0	0	0	0	0	0	0	0	0
95	37	1	0	0	0	0	0	0	0	0	0
100	44	1	0	0	0	0	0	0	0	0	0
105	46	1	0	0	0	0	0	0	0	0	0
110	39	1	0	0	0	0	0	0	0	0	0
115	43	1	0	0	0	0	0	0	0	0	0
120	50	1	0	0	0	0	0	0	0	0	0
125	60	1	0	0	0	0	0	0	0	0	0
130	72	1	0	0	0	0	0	0	0	0	0
135	107	2	0	0	0	0	0	0	0	0	0
140	153	2	0	0	0	0	0	0	0	0	0
145	154	2	0	0	0	0	0	0	0	0	0
150	167	3	0	0	0	0	0	0	0	0	0
155	166	3	0	0	0	0	0	0	0	0	0
160	158	3	0	0	0	0	0	0	0	0	0
165	214	3	0	0	0	0	0	0	0	0	0
170	168	3	0	0	0	0	0	0	0	0	0
175	186	3	0	0	0	0	0	0	0	0	0
180	167	3	0	0	0	0	0	0	0	0	0
185	140	2	0	0	0	0	0	0	0	0	0
190	96	2	0	0	0	0	0	0	0	0	0
195	108	2	0	0	0	0	0	0	0	0	0
200	68	1	0	0	0	0	0	0	0	0	0
205	61	1	0	0	0	0	0	0	0	0	0
210	55	1	0	0	0	0	0	0	0	0	0
215	56	1	0	0	0	0	0	0	0	0	0
220	47	1	0	0	0	0	0	0	0	0	0
225	38	1	0	0	0	0	0	0	0	0	0
230	46	1	0	0	0	0	0	0	0	0	0
235	39	1	0	0	0	0	0	0	0	0	0
240	46	1	0	0	0	0	0	0	0	0	0
245	38	1	0	0	0	0	0	0	0	0	0
250	44	1	0	0	0	0	0	0	0	0	0
255	43	1	0	0	0	0	0	0	0	0	0
260	40	1	0	0	0	0	0	0	0	0	0
265	42	1	0	0	0	0	0	0	0	0	0
270	43	1	0	0	0	0	0	0	0	0	0
275	52	1	0	0	0	0	0	0	0	0	0
280	52	1	0	0	0	0	0	0	0	0	0
285	46	1	0	0	0	0	0	0	0	0	0
290	50	1	0	0	0	0	0	0	0	0	0
295	61	1	0	0	0	0	0	0	0	0	0
300	75	1	0	0	0	0	0	0	0	0	0
305	63	1	0	0	0	0	0	0	0	0	0
310	51	1	0	0	0	0	0	0	0	0	0
315	69	1	0	0	0	0	0	0	0	0	0
320	81	1	0	0	0	0	0	0	0	0	0
325	81	1	0	0	0	0	0	0	0	0	0
330	101	2	0	0	0	0	0	0	0	0	0
335	168	3	0	0	0	0	0	0	0	0	0
340	250	4	0	0	0	0	0	0	0	0	0
345	272	4	0	0	0	0	0	0	0	0	0
350	263	4	0	0	0	0	0	0	0	0	0
355	177	3	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 6224

FIG. 24B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING JULY 10 THROUGH AUGUST 22, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 13. 2/10/ 7/69 TO 16.28/22/ 8/69

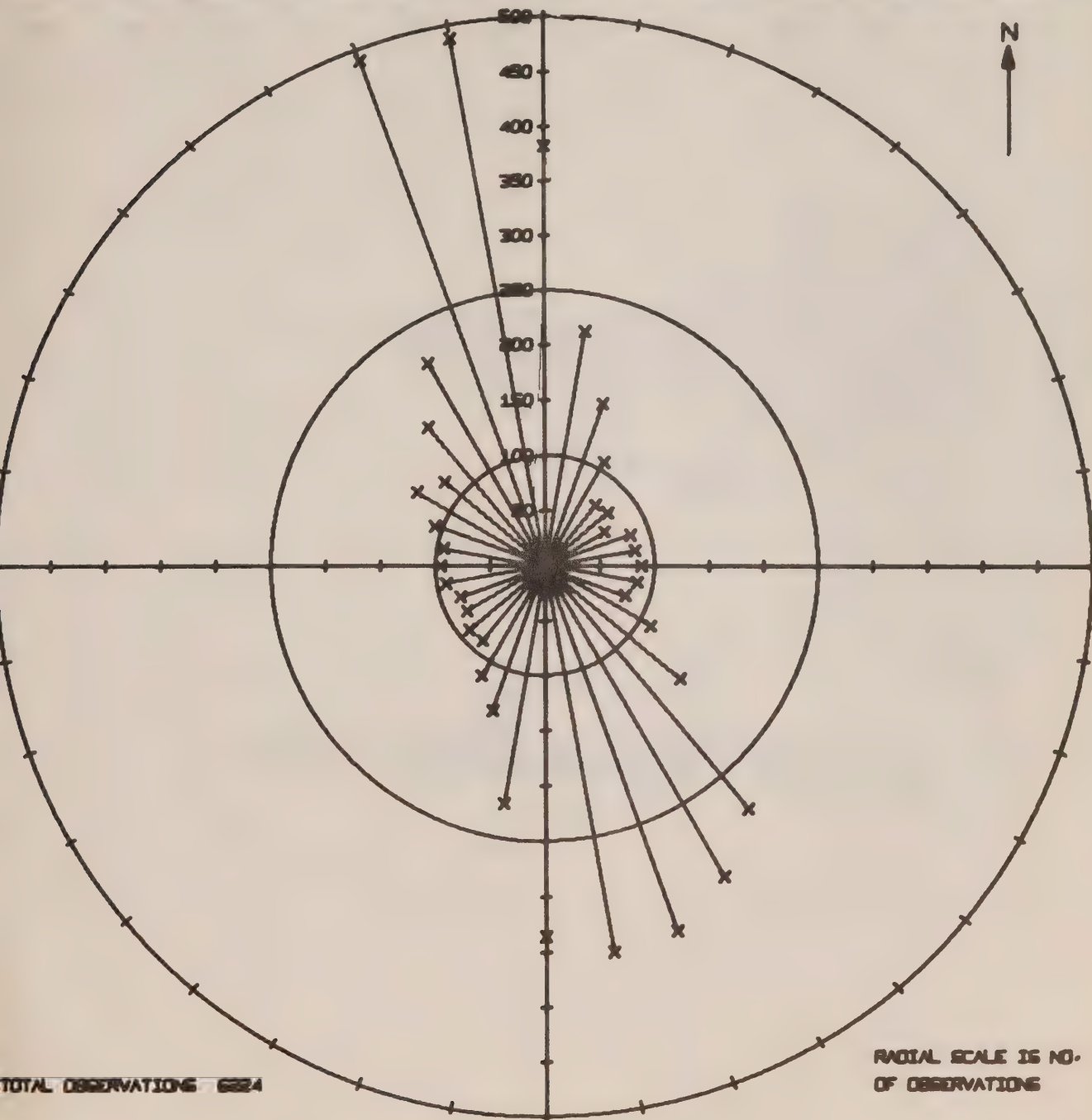


FIG. 24c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING JULY 10 THROUGH AUGUST 22, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 13. 2/10/ 7/69 TO 16.28/22/ 8/69

MEAN TEMP.	FREQUENCY NO.	PERCENT PCT.	0	100	200	300	400	500	600	700	800	900	1000
			I	I	I	I	I	I	I	I	I	I	I
8.00	0	0	0										
8.05	0	0	0										
8.10	0	0	0										
8.15	0	0	0										
8.20	0	0	0										
8.25	0	0	0										
8.30	0	0	0										
8.35	23	0	0**										
8.40	21	0	0**										
8.45	45	1	0*****										
8.50	192	3	0*****										
8.55	176	3	0*****										
8.60	193	3	0*****										
8.65	92	1	0*****										
8.70	267	4	0*****										
8.75	305	5	0*****										
8.80	303	6	0*****										
8.85	701	11	0*****										
8.90	621	10	0*****										
8.95	514	8	0*****										
9.00	573	9	0*****										
9.05	512	8	0*****										
9.10	296	5	0*****										
9.15	233	4	0*****										
9.20	180	3	0*****										
9.25	156	3	0*****										
9.30	189	3	0*****										
9.35	141	2	0*****										
9.40	122	2	0*****										
9.45	58	1	0*****										
9.50	58	1	0*****										
9.55	51	1	0*****										
9.60	55	1	0*****										
9.65	28	0	0***										
9.70	4	0	0										
9.75	17	0	0**										
9.80	17	0	0**										
9.85	0	0	0										
9.90	1	0	0										

NUMBER OF TEMP. GREATER THAN 9.90 = 0 NUMBER OF OBSERVATIONS = 6224 MEAN TEMP = 8.96 DEG. C.

FIG. 24d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS
OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING JULY 10 THROUGH
AUGUST 22, 1969.

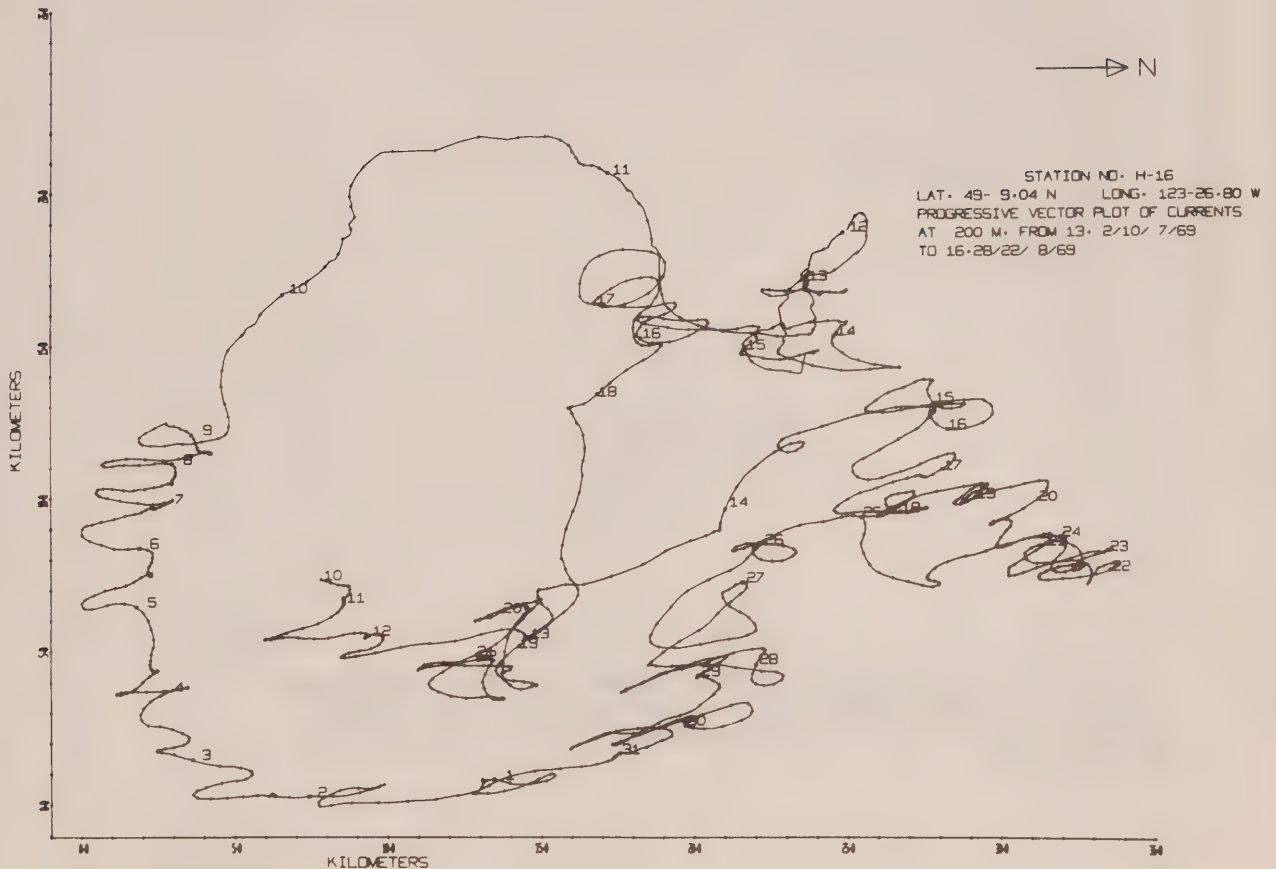


Fig. 24e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 43-day period during July 10 through August 22, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 15.47/28/ 8/69 TO 11.57/18/ 9/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	307	10	0	*****									
20	70	2	0	*****									
30	76	3	0	*****									
40	249	8	0	*****									
50	139	5	0	*****									
60	265	9	0	*****									
70	153	5	0	*****									
80	225	7	0	*****									
90	138	5	0	*****									
100	131	4	0	*****									
110	163	5	0	*****									
120	78	3	0	*****									
130	163	5	0	*****									
140	125	4	0	*****									
150	119	4	0	*****									
160	79	3	0	*****									
170	63	2	0	*****									
180	93	3	0	*****									
190	47	2	0	*****									
200	85	3	0	*****									
210	31	1	0	*****									
220	37	1	0	*****									
230	32	1	0	*****									
240	32	1	0	*****									
250	39	1	0	*****									
260	21	1	0	****									
270	18	1	0	****									
280	2	0	0										
290	8	0	0**										
300	3	0	0*										
310	2	0	0										
320	2	0	0										
330	1	0	0										
340	1	0	0										
350	2	0	0										
360	2	0	0										
370	2	0	0										

NUMBER OF SPEEDS GREATER THAN 370 = 0 NUMBER OF OBSERVATIONS = 3003 MEAN SPEED = 100 MM/SEC

FIG. 25A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 15.47/23/ 8/69 TO 11.57/18/ 9/69



NUMBER OF OBSERVATIONS = 3033

FIG. 25B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 15.47/28/ 8/69 TO 11.57/18/ 9/69

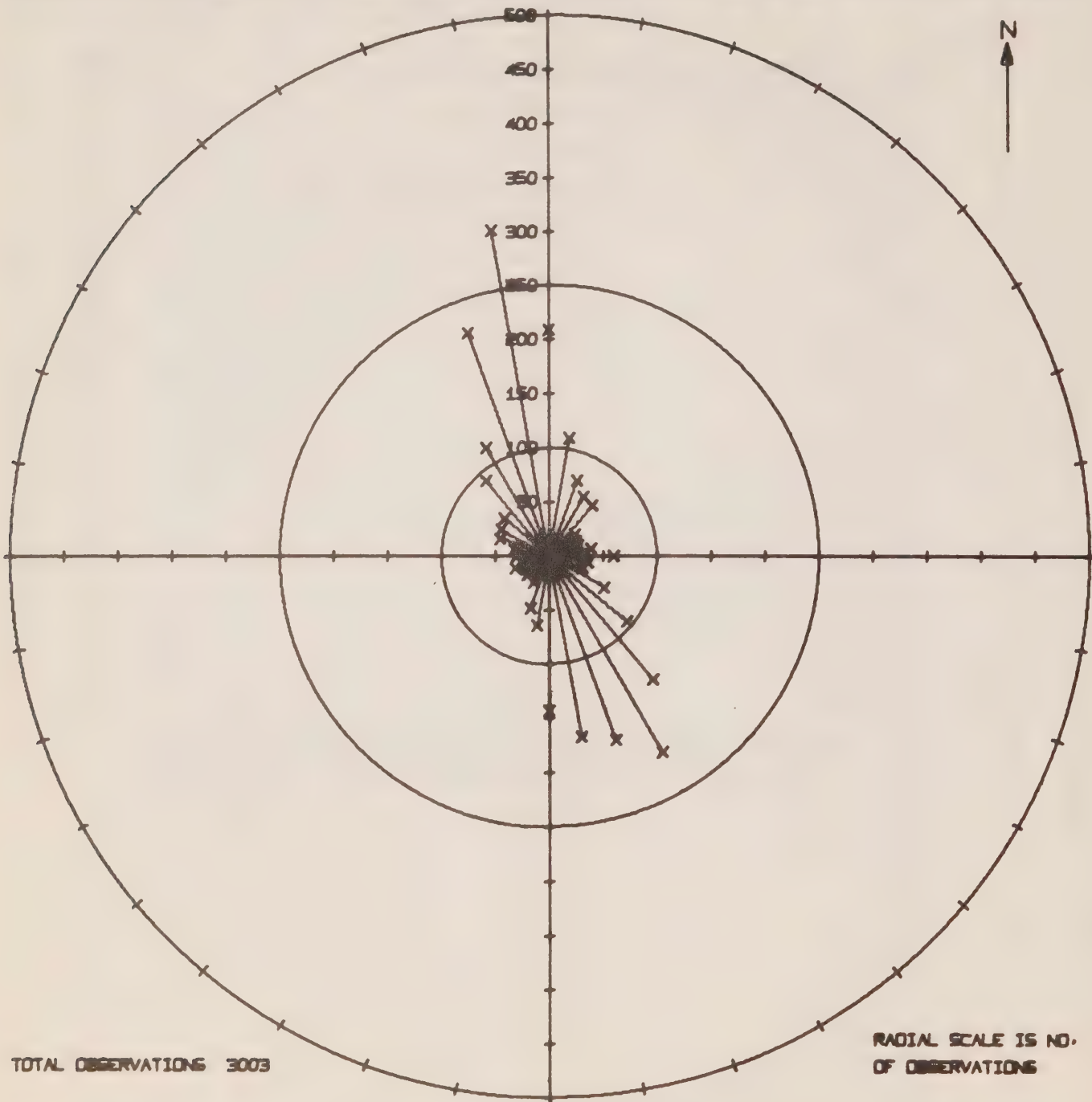


FIG. 25c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 19.47/20/ 8/69 TO 19.53/ 6/ 9/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
2.90	1	0.1										
3.00	0	0.0										
3.10	0	0.0										
3.20	0	0.0										
3.30	0	0.0										
3.40	0	0.0										
3.50	0	0.0										
3.60	0	0.0										
3.70	0	0.0										
3.80	0	0.0										
3.90	0	0.0										
4.00	0	0.0										
4.10	0	0.0										
4.20	0	0.0										
4.30	0	0.0										
4.40	0	0.0										
4.50	1	0.1										
4.60	0	0.0										
4.70	0	0.0										
4.80	0	0.0										
4.90	0	0.0										
5.00	0	0.0										
5.10	0	0.0										
5.20	0	0.0										
5.30	0	0.0										
5.40	0	0.0										
5.50	0	0.0										
5.60	0	0.0										
5.70	0	0.0										
5.80	0	0.0										
5.90	0	0.0										
6.00	1	0.1										
6.10	1	0.1										
6.20	0	0.0										
6.30	0	0.0										
6.40	0	0.0										
6.50	0	0.0										
6.60	0	0.0										
6.70	0	0.0										
6.80	0	0.0										
6.90	0	0.0										
7.00	1	0.1										
7.10	0	0.0										
7.20	0	0.0										
7.30	0	0.0										
7.40	0	0.0										
7.50	0	0.0										
7.60	2	0.2										
7.70	0	0.0										
7.80	0	0.0										
7.90	0	0.0										
8.00	0	0.0										
8.10	0	0.0										
8.20	0	0.0										
8.30	1	0.1										
8.40	1	0.1										
8.50	0	0.0										
8.60	1	0.1										
8.70	0	0.0										
8.80	0	0.0										
8.90	0	0.0										
9.00	25	2.5	0***									
9.10	429	32	0*****									
9.20	633	48	0*****									
9.30	79	6	0*****									
9.40	24	2	0**									
9.50	0	1	0*									
9.60	14	1	0**									
9.70	10	1	0*									
9.80	50	4	0*****									
9.90	3	0	0*									
10.00	1	0	0*									
10.10	5	0	0*									
10.20	1	0	0*									
10.30	0	0	0									
10.40	1	0	0									
10.50	0	0	0									
10.60	3	0	0									
10.70	0	0	0									
10.80	0	0	0									
10.90	0	0	0									
11.00	1	0	0									
11.10	0	0	0									
11.20	0	0	0									
11.30	1	0	0									
11.40	1	0	0									
11.50	1	0	0									
11.60	0	0	0									
11.70	0	0	0									
11.80	0	0	0									
11.90	0	0	0									

NUMBER OF TEMP. GREATER THAN 11.90 = 7

NUMBER OF OBSERVATIONS = 1322

MEAN TEMP = 9.15 DEG. C.

FIG. 25d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 6, 1969.

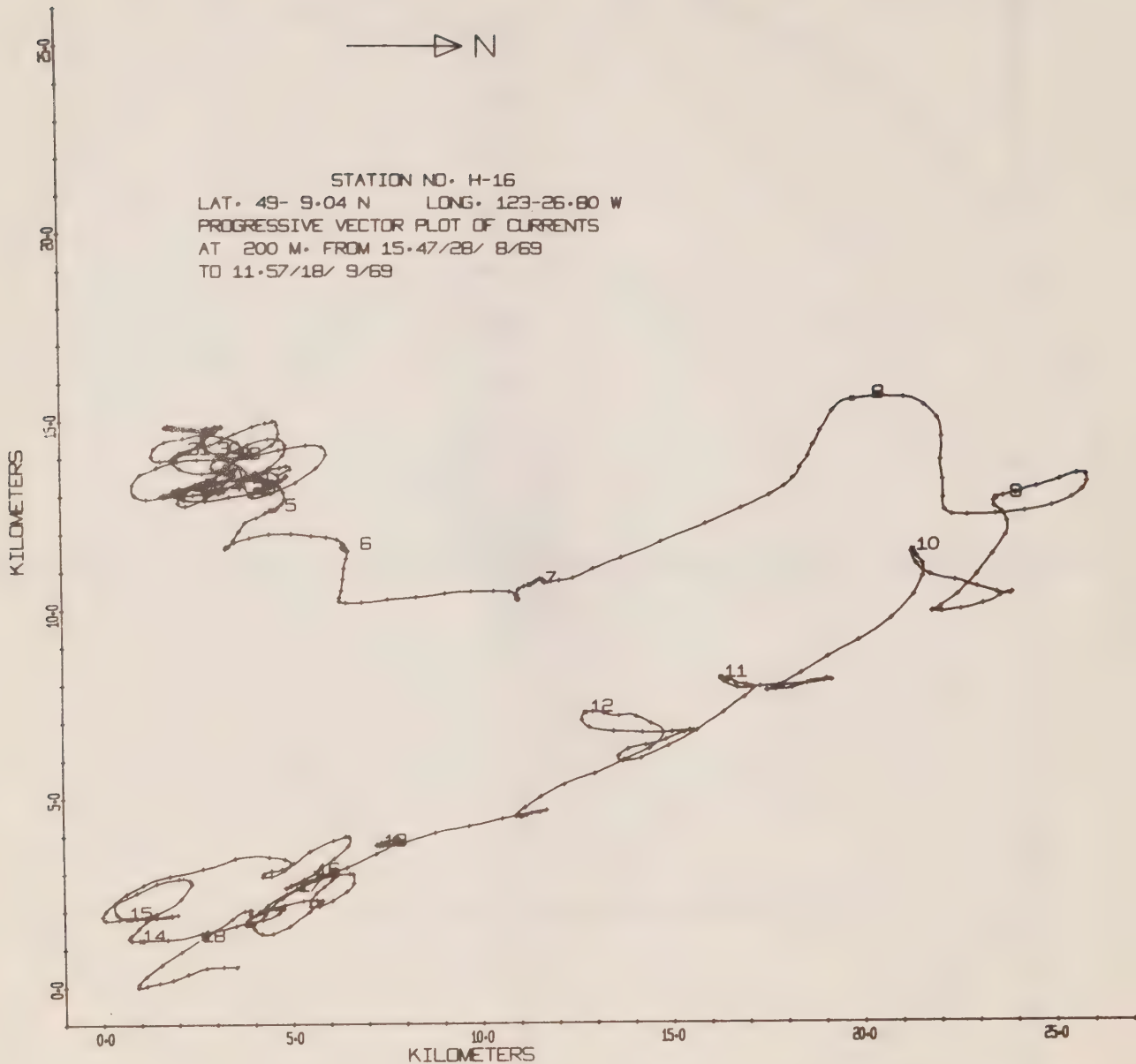


Fig. 25e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 21-day period during August 28 through September 18, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 0.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CORRECTION AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 14.47/14/ 9/69 TO 0.10/16/10/69

SPEED	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
0	1	1										
10	253	7										
20	111	3										
30	172	4										
40	293	10										
50	277	7										
60	457	11										
70	279	7										
80	292	10										
90	204	5										
100	217	5										
110	270	7										
120	152	4										
130	137	3										
140	63	2										
150	105	3										
160	59	2										
170	70	2										
180	38	1										
190	37	1										
200	47	1										
210	20	1										
220	26	1										
230	9	0										
240	15	0										
250	3	0										
260	5	0										
270	6	0										
280	5	0										
290	11	0										
300	5	0										
310	2	0										
320	1	0										

NUMBER OF SPEEDS GREATER THAN 300 = 0

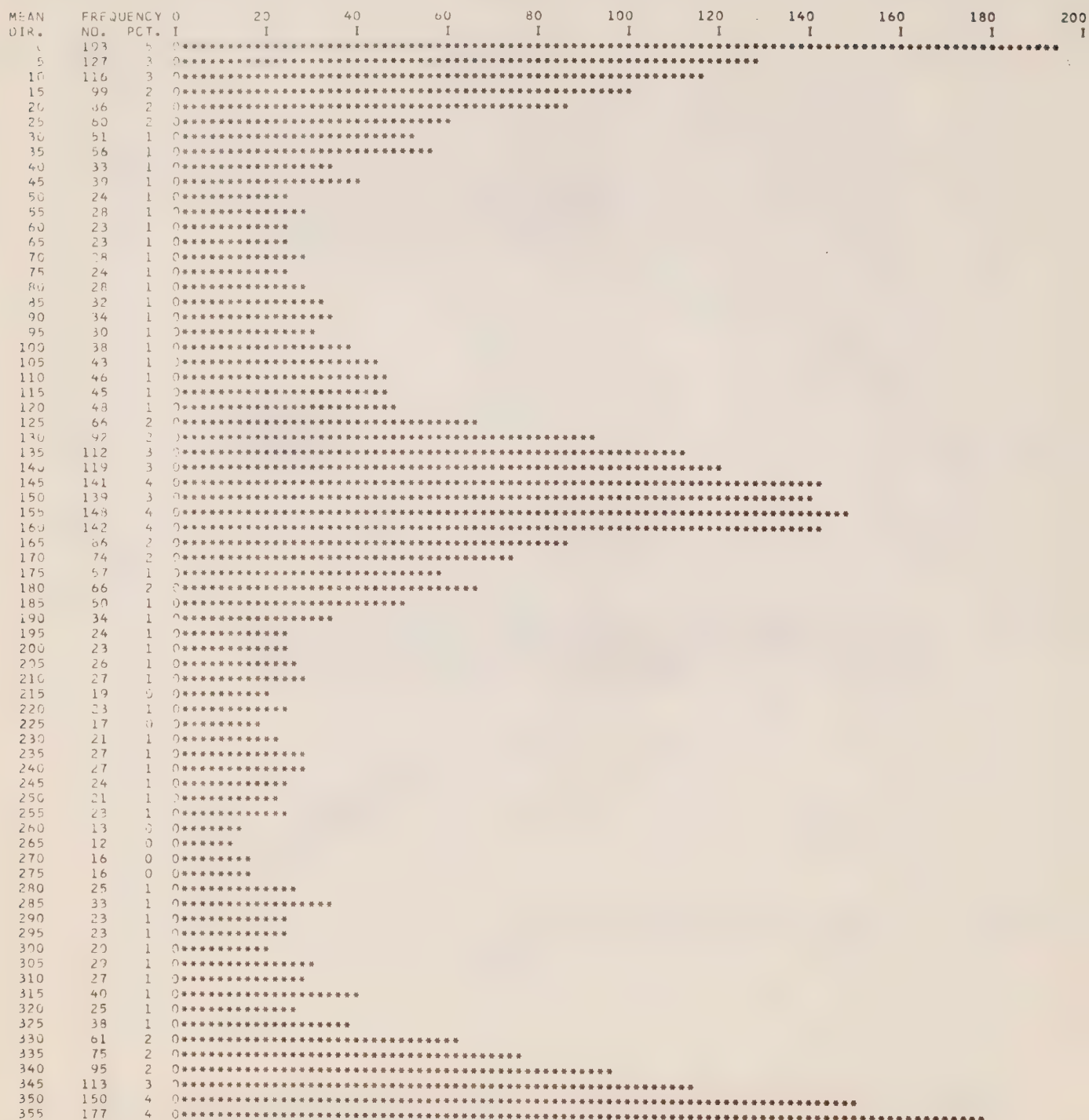
NUMBER OF OBSERVATIONS = 3993

MEAN SPEED = 85 MM/SEC

FIG. 26A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 2.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 14.47/18/ 9/69 TO 08.10/16/10/69



NUMBER OF OBSERVATIONS = 3993

FIG. 26B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H-16 LAT. 49-5.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 14-07/18/ 9/69 TO 0-10/16/10/69

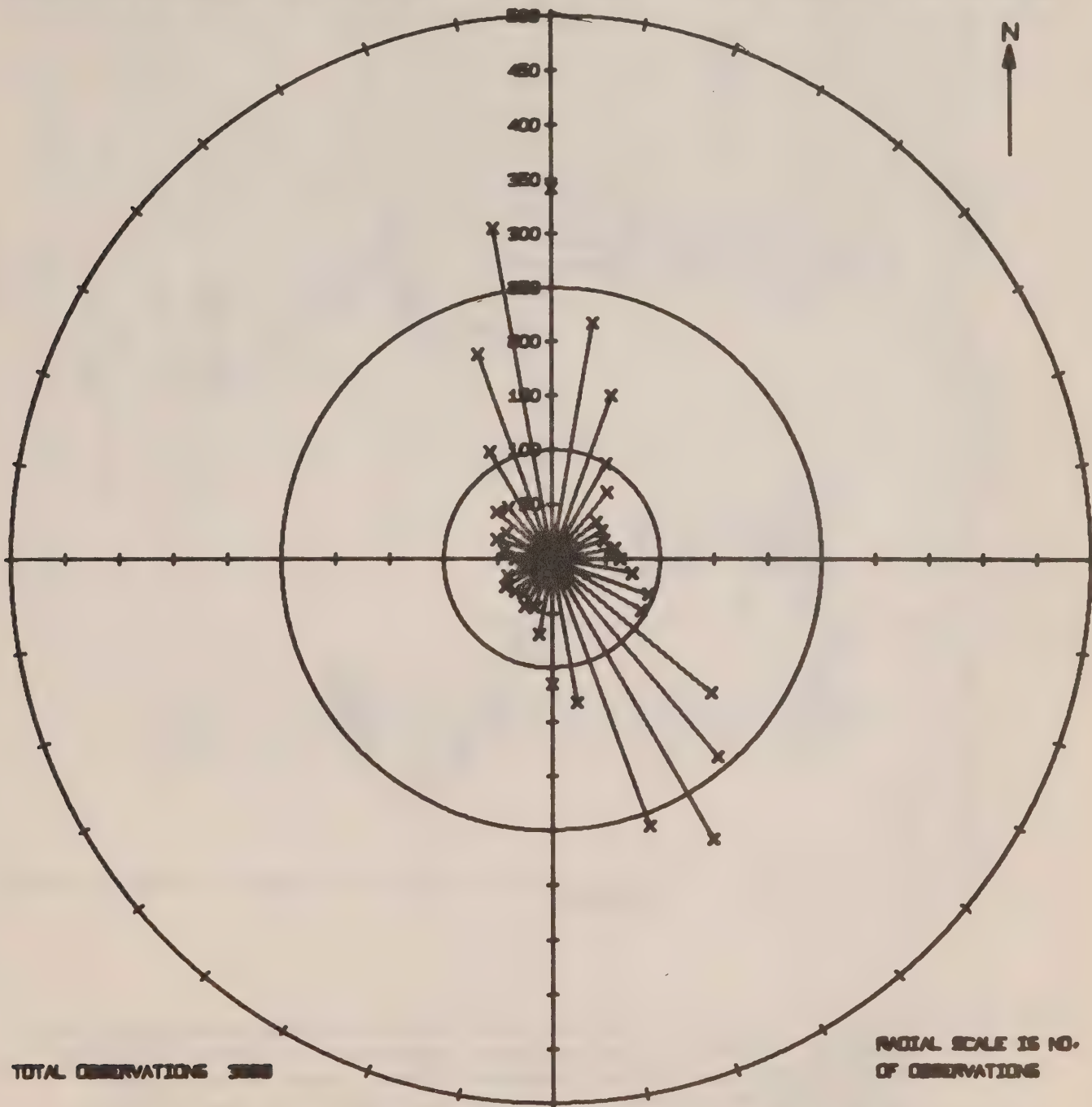


FIG. 26c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

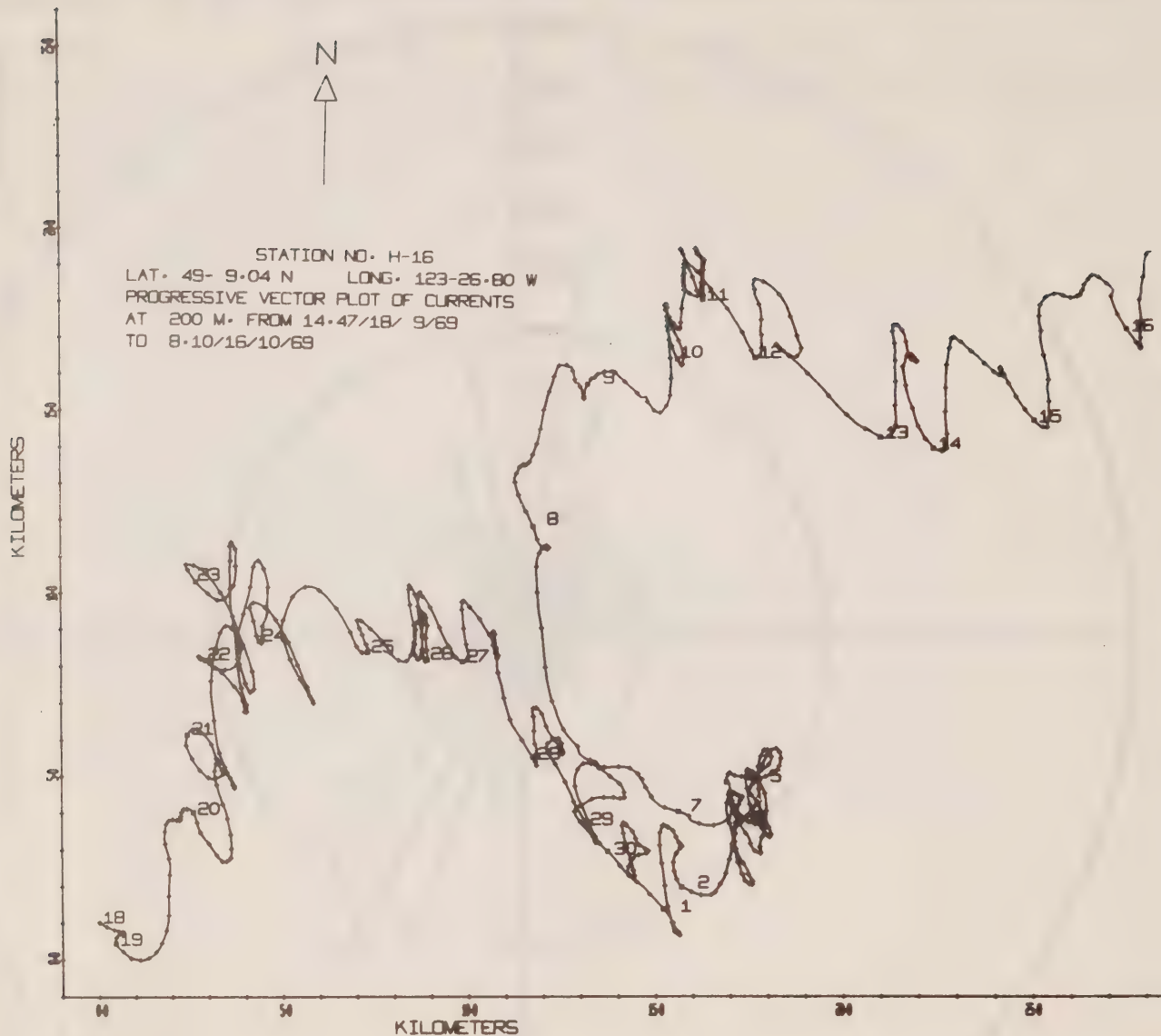


Fig. 26d. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 28-day period during September 18 through October 16, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 11. 7/16/10/69 TO 6.30/11/11/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
0	0	0	0										
10	224	6	0	0	0	0	0	0	0	0	0	0	0
20	97	3	0	0	0	0	0	0	0	0	0	0	0
30	166	4	0	0	0	0	0	0	0	0	0	0	0
40	378	10	0	0	0	0	0	0	0	0	0	0	0
50	260	7	0	0	0	0	0	0	0	0	0	0	0
60	453	12	0	0	0	0	0	0	0	0	0	0	0
70	234	6	0	0	0	0	0	0	0	0	0	0	0
80	293	8	0	0	0	0	0	0	0	0	0	0	0
90	178	5	0	0	0	0	0	0	0	0	0	0	0
100	161	4	0	0	0	0	0	0	0	0	0	0	0
110	204	5	0	0	0	0	0	0	0	0	0	0	0
120	128	3	0	0	0	0	0	0	0	0	0	0	0
130	193	5	0	0	0	0	0	0	0	0	0	0	0
140	128	3	0	0	0	0	0	0	0	0	0	0	0
150	145	4	0	0	0	0	0	0	0	0	0	0	0
160	62	2	0	0	0	0	0	0	0	0	0	0	0
170	71	2	0	0	0	0	0	0	0	0	0	0	0
180	102	3	0	0	0	0	0	0	0	0	0	0	0
190	61	2	0	0	0	0	0	0	0	0	0	0	0
200	51	1	0	0	0	0	0	0	0	0	0	0	0
210	27	1	0	0	0	0	0	0	0	0	0	0	0
220	29	1	0	0	0	0	0	0	0	0	0	0	0
230	14	0	0	0	0	0	0	0	0	0	0	0	0
240	12	0	0	0	0	0	0	0	0	0	0	0	0
250	21	1	0	0	0	0	0	0	0	0	0	0	0
260	12	0	0	0	0	0	0	0	0	0	0	0	0
270	7	0	0	0	0	0	0	0	0	0	0	0	0
280	2	0	0	0	0	0	0	0	0	0	0	0	0
290	2	0	0	0	0	0	0	0	0	0	0	0	0
300	0	0	0	0	0	0	0	0	0	0	0	0	0
310	0	0	0	0	0	0	0	0	0	0	0	0	0
320	1	0	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 320 = 0

NUMBER OF OBSERVATIONS = 3717

MEAN SPEED = 88 MM/SEC

FIG. 27A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 27-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 12, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 11. 7/16/10/69 TO 6.30/11/11/69

MEAN DIR.	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350	400
0	164	4	0	*****							
5	112	3	0	*****							
10	137	4	0	*****							
15	71	2	0	*****							
20	71	2	0	*****							
25	61	2	0	*****							
30	31	1	0	*****							
35	25	1	0	*****							
40	21	1	0	****							
45	19	1	0	****							
50	15	0	0	***							
55	19	1	0	****							
60	23	1	0	****							
65	12	0	0	**							
70	24	1	0	****							
75	19	1	0	****							
80	21	1	0	****							
85	28	1	0	*****							
90	26	1	0	****							
95	21	1	0	****							
100	30	1	0	*****							
105	25	1	0	****							
110	23	1	0	****							
115	42	1	0	*****							
120	50	1	0	*****							
125	50	1	0	*****							
130	63	2	0	*****							
135	82	2	0	*****							
140	104	3	0	*****							
145	121	3	0	*****							
150	137	4	0	*****							
155	122	3	0	*****							
160	108	3	0	*****							
165	87	2	0	*****							
170	75	2	0	*****							
175	47	1	0	*****							
180	40	1	0	*****							
185	38	1	0	*****							
190	25	1	0	****							
195	23	1	0	****							
200	20	1	0	****							
205	32	1	0	*****							
210	33	1	0	*****							
215	35	1	0	*****							
220	18	0	0	****							
225	26	1	0	****							
230	30	1	0	****							
235	20	1	0	****							
240	33	1	0	*****							
245	16	0	0	***							
250	27	1	0	****							
255	25	1	0	****							
260	18	0	0	****							
265	14	0	0	***							
270	19	1	0	****							
275	15	0	0	***							
280	18	0	0	****							
285	13	0	0	***							
290	28	1	0	*****							
295	24	1	0	****							
300	23	1	0	****							
305	26	1	0	****							
310	24	1	0	****							
315	43	1	0	*****							
320	35	1	0	*****							
325	51	1	0	*****							
330	79	2	0	*****							
335	122	3	0	*****							
340	103	3	0	*****							
345	156	4	0	*****							
350	210	6	0	*****							
355	176	5	0	*****							

NUMBER OF OBSERVATIONS = 3717

FIG. 27B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 27-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 12, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 11. 7/16/10/69 TO 6.30/11/11/69

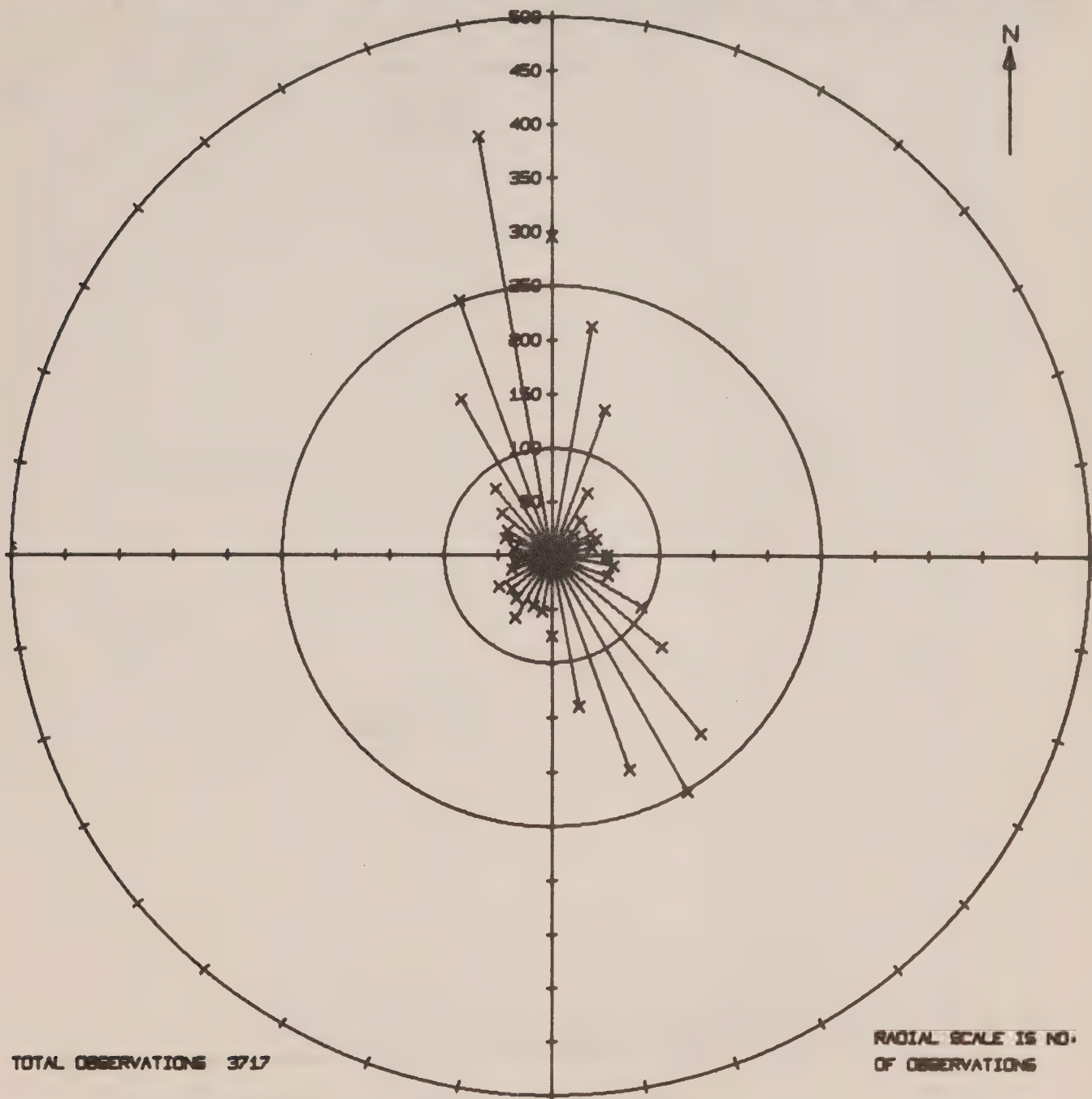


FIG. 27c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE), IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 27-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 12, 1969.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 11. 7/16/10/69 TO 6.30/11/11/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I	1600 I	1800 I	2000 I
3.00	0	0 0										
3.10	1	0 0										
3.20	0	0 0										
3.30	0	0 0										
3.40	0	0 0										
3.50	0	0 0										
3.60	0	0 0										
3.70	0	0 0										
3.80	0	0 0										
3.90	0	0 0										
4.00	0	0 0										
4.10	0	0 0										
4.20	0	0 0										
4.30	0	0 0										
4.40	0	0 0										
4.50	0	0 0										
4.60	0	0 0										
4.70	0	0 0										
4.80	0	0 0										
4.90	0	0 0										
5.00	0	0 0										
5.10	0	0 0										
5.20	0	0 0										
5.30	1	0 0										
5.40	0	0 0										
5.50	0	0 0										
5.60	0	0 0										
5.70	0	0 0										
5.80	0	0 0										
5.90	0	0 0										
6.00	0	0 0										
6.10	1	0 0										
6.20	0	0 0										
6.30	0	0 0										
6.40	0	0 0										
6.50	0	0 0										
6.60	0	0 0										
6.70	0	0 0										
6.80	0	0 0										
6.90	0	0 0										
7.00	0	0 0										
7.10	0	0 0										
7.20	1	0 0										
7.30	0	0 0										
7.40	0	0 0										
7.50	0	0 0										
7.60	0	0 0										
7.70	1	0 0										
7.80	0	0 0										
7.90	0	0 0										
8.00	0	0 0										
8.10	1	0 0										
8.20	0	0 0										
8.30	0	0 0										
8.40	1	0 0										
8.50	0	0 0										
8.60	0	0 0										
8.70	0	0 0										
8.80	0	0 0										
8.90	10	0 0*										
9.00	342	9 0*****										
9.10	1373	37 0*****										
9.20	1982	53 0*****										
9.30	3	0 0										

NUMBER OF TEMP. GREATER THAN 9.30 = 0

NUMBER OF OBSERVATIONS = 3717

MEAN TEMP = 9.14 DEG. C.

FIG. 27d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 27-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 12, 1969.



Fig. 27e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 27-day period during October 16 through November 12, 1969. The spatial scale corresponds to the displacement that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 14.57/25/11/69 TO 8.29/ 9/ 1/70

MEAN SPEED	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	736	11	0	*****									
20	245	4	0	*****									
30	171	4	0	*****									
40	560	9	0	*****									
50	483	7	0	*****									
60	601	10	0	*****									
70	418	6	0	*****									
80	464	7	0	*****									
90	262	4	0	*****									
100	282	4	0	*****									
110	350	5	0	*****									
120	197	3	0	*****									
130	411	5	0	*****									
140	139	2	0	*****									
150	206	3	0	*****									
160	133	2	0	*****									
170	100	2	0	*****									
180	128	2	0	*****									
190	68	1	0	*****									
200	81	1	0	*****									
210	44	1	0	****									
220	61	1	0	*****									
230	25	0	0	****									
240	26	0	0	****									
250	40	1	0	****									
260	17	0	0	***									
270	24	0	0	**									
280	17	0	0	**									
290	26	0	0	***									
300	13	0	0	*									
310	8	0	0	*									
320	11	0	0	*									
330	8	0	0	*									
340	4	0	0										
350	1	0	0										
360	9	0	0	*									
370	3	0	0										
380	3	0	0										
390	5	0	0	*									
400	2	0	0										
410	2	0	0										
420	4	0	0										
430	3	0	0										
440	1	0	0										
450	6	0	0	*									
460	5	0	0	*									
470	0	0	0										
480	2	0	0										
490	2	0	0										
500	1	0	0										

NUMBER OF SPEEDS GREATER THAN 500 = 0

NUMBER OF OBSERVATIONS = 6443

MEAN SPEED = 87 MM/SEC

FIG. 28a. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 44-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.54 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 14.57/25/11/69 TO 8.29/ 9/ 1/70

MEAN	FREQUENCY		50	100	150	200	250	300	350	400
DIR.	NO.	PCT. I	I	I	I	I	I	I	I	I
0	145	2	0	0	0	0	0	0	0	0
5	173	2	0	0	0	0	0	0	0	0
10	96	1	0	0	0	0	0	0	0	0
15	90	1	0	0	0	0	0	0	0	0
20	87	1	0	0	0	0	0	0	0	0
25	94	1	0	0	0	0	0	0	0	0
30	59	1	0	0	0	0	0	0	0	0
35	53	1	0	0	0	0	0	0	0	0
40	40	1	0	0	0	0	0	0	0	0
45	38	1	0	0	0	0	0	0	0	0
50	40	1	0	0	0	0	0	0	0	0
55	33	1	0	0	0	0	0	0	0	0
60	30	0	0	0	0	0	0	0	0	0
65	46	1	0	0	0	0	0	0	0	0
70	54	1	0	0	0	0	0	0	0	0
75	30	0	0	0	0	0	0	0	0	0
80	33	1	0	0	0	0	0	0	0	0
85	41	1	0	0	0	0	0	0	0	0
90	35	1	0	0	0	0	0	0	0	0
95	40	1	0	0	0	0	0	0	0	0
100	49	1	0	0	0	0	0	0	0	0
105	34	1	0	0	0	0	0	0	0	0
110	50	1	0	0	0	0	0	0	0	0
115	47	1	0	0	0	0	0	0	0	0
120	83	1	0	0	0	0	0	0	0	0
125	86	1	0	0	0	0	0	0	0	0
130	77	2	0	0	0	0	0	0	0	0
135	132	2	0	0	0	0	0	0	0	0
140	167	3	0	0	0	0	0	0	0	0
145	249	4	0	0	0	0	0	0	0	0
150	285	4	0	0	0	0	0	0	0	0
155	289	4	0	0	0	0	0	0	0	0
160	237	4	0	0	0	0	0	0	0	0
165	183	3	0	0	0	0	0	0	0	0
170	151	2	0	0	0	0	0	0	0	0
175	136	2	0	0	0	0	0	0	0	0
180	113	2	0	0	0	0	0	0	0	0
185	104	2	0	0	0	0	0	0	0	0
190	97	2	0	0	0	0	0	0	0	0
195	109	2	0	0	0	0	0	0	0	0
200	91	1	0	0	0	0	0	0	0	0
205	63	1	0	0	0	0	0	0	0	0
210	53	1	0	0	0	0	0	0	0	0
215	32	0	0	0	0	0	0	0	0	0
220	36	1	0	0	0	0	0	0	0	0
225	22	0	0	0	0	0	0	0	0	0
230	31	0	0	0	0	0	0	0	0	0
235	26	0	0	0	0	0	0	0	0	0
240	33	1	0	0	0	0	0	0	0	0
245	27	0	0	0	0	0	0	0	0	0
250	18	0	0	0	0	0	0	0	0	0
255	38	1	0	0	0	0	0	0	0	0
260	27	0	0	0	0	0	0	0	0	0
265	40	1	0	0	0	0	0	0	0	0
270	31	0	0	0	0	0	0	0	0	0
275	36	1	0	0	0	0	0	0	0	0
280	34	1	0	0	0	0	0	0	0	0
285	30	0	0	0	0	0	0	0	0	0
290	46	1	0	0	0	0	0	0	0	0
295	46	1	0	0	0	0	0	0	0	0
300	38	1	0	0	0	0	0	0	0	0
305	54	1	0	0	0	0	0	0	0	0
310	56	1	0	0	0	0	0	0	0	0
315	97	2	0	0	0	0	0	0	0	0
320	134	2	0	0	0	0	0	0	0	0
325	153	2	0	0	0	0	0	0	0	0
330	222	3	0	0	0	0	0	0	0	0
335	261	4	0	0	0	0	0	0	0	0
340	222	3	0	0	0	0	0	0	0	0
345	220	3	0	0	0	0	0	0	0	0
350	171	3	0	0	0	0	0	0	0	0
355	143	2	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 6443

FIG. 28B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 44-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 14.57/25/11/69 TO 0.29/ 9/ 1/70

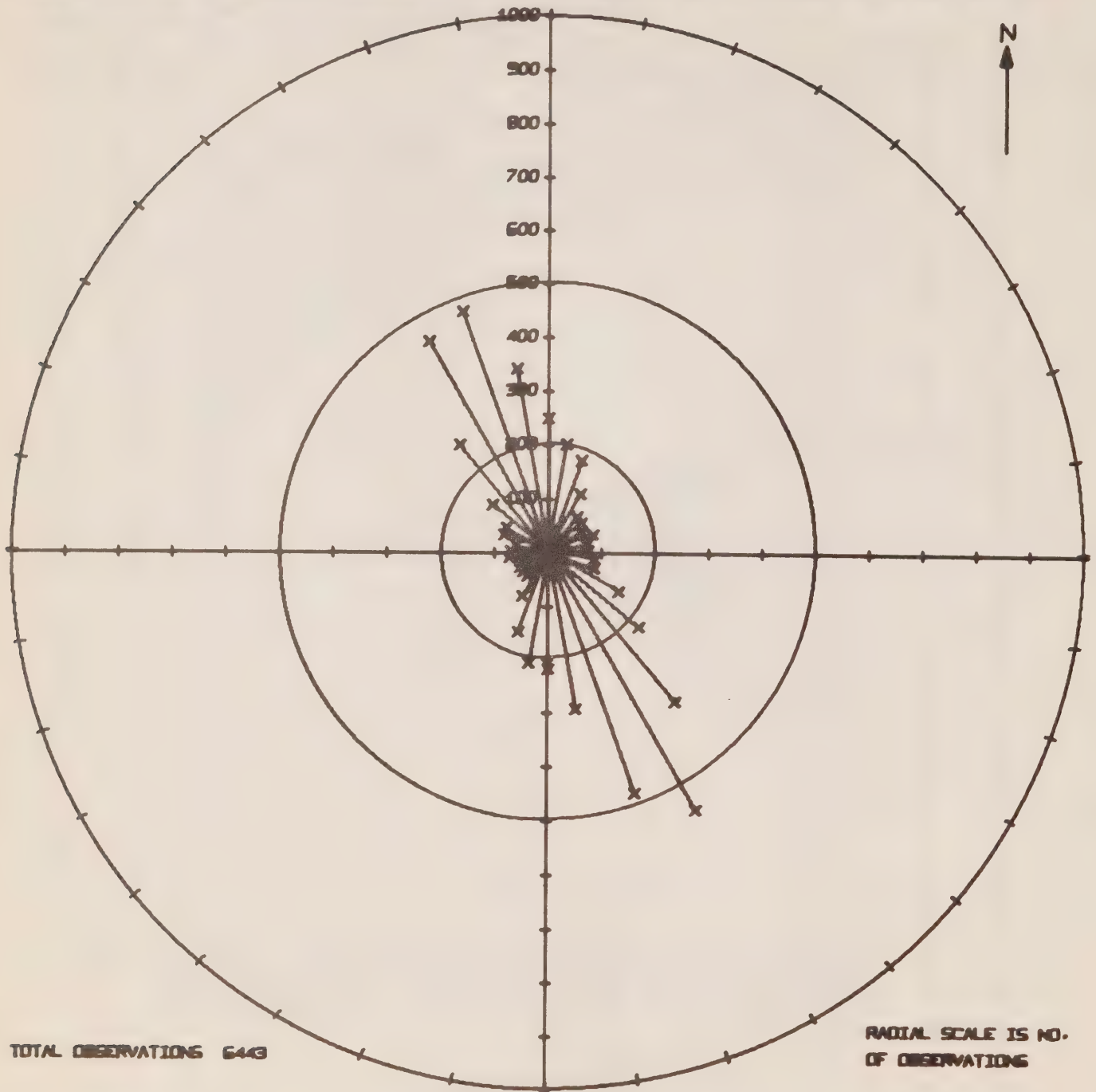


FIG. 28c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 44-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970.

STATION NO. H-16 LAT. 49- 3.34 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 14.57/25/11/69 TO 8.29/ 9/ 1/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I	1600 I	1800 I	2000 I
8.00	0	0										
8.05	0	0										
8.10	0	0										
8.15	0	0										
8.20	0	0										
8.25	0	0										
8.30	0	0										
8.35	0	0										
8.40	0	0										
8.45	0	0										
8.50	0	0										
8.55	72	1	0****									
8.60	73	1	0****									
8.65	49	1	0***									
8.70	193	3	0*****									
8.75	79	1	0****									
8.80	118	2	0*****									
8.85	119	2	0*****									
8.90	554	9	0*****									
8.95	1970	30	0*****									
9.00	1263	20	0*****									
9.05	1878	29	0*****									
9.10	65	1	0***									
9.15	7	0	0									
9.20	1	0	0									
9.25	1	0	0									
9.30	13	0	0*									
9.35	0	0	0									
9.40	0	0	0									
9.45	0	0	0									
9.50	1	0	0									
9.55	0	0	0									
9.60	0	0	0									
9.65	0	0	0									
9.70	2	0	0									

NUMBER OF TEMP. GREATER THAN 9.70 = 0

NUMBER OF OBSERVATIONS = 6443

MEAN TEMP = 8.96 DEG. C.

FIG. 28d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 44-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970.

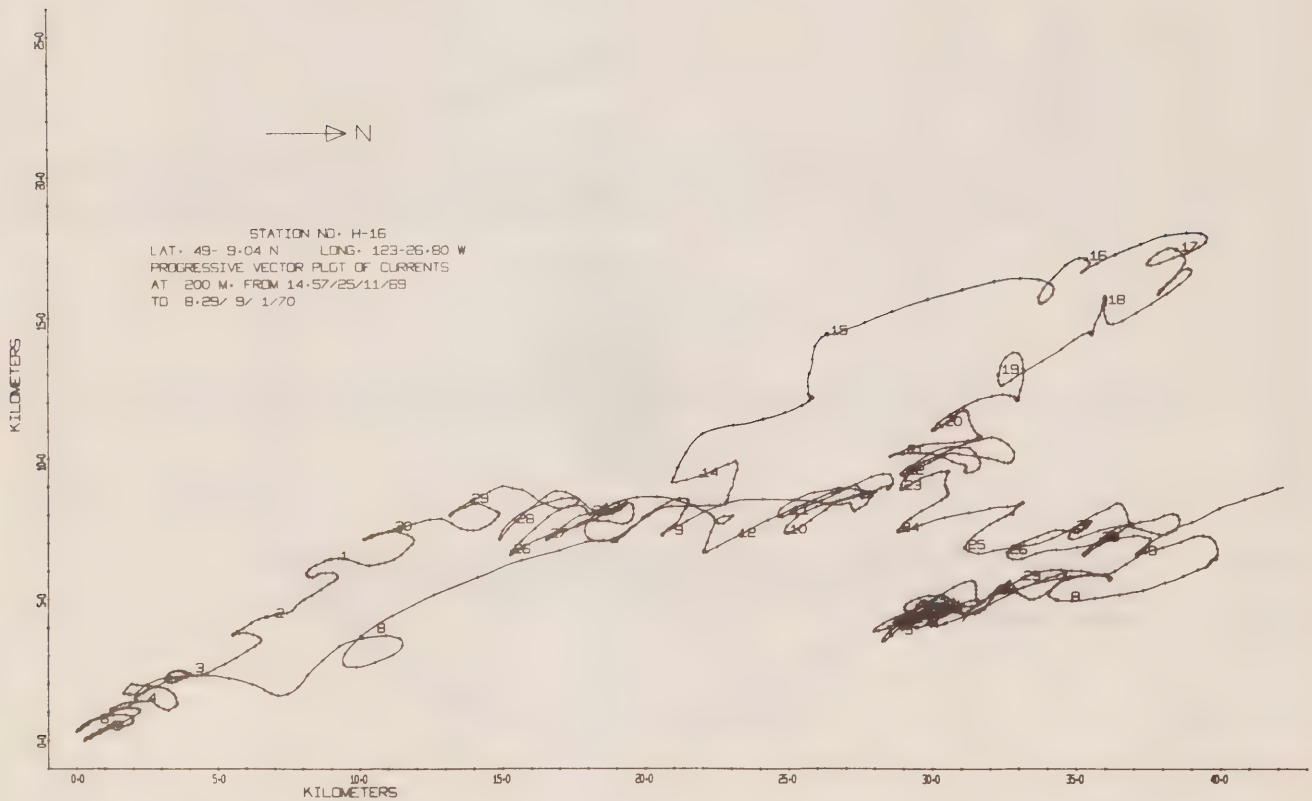


Fig. 28e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 44-day period during November 25, 1969 through January 9, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.34 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 14.14/ 9/ 1/70 TO 3.47/20/ 2/70

MAIN SPEED	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	552	9	0	0	0	0	0	0	0	0	0	0
10	132	3	0	0	0	0	0	0	0	0	0	0
20	304	5	0	0	0	0	0	0	0	0	0	0
30	225	4	0	0	0	0	0	0	0	0	0	0
40	411	7	0	0	0	0	0	0	0	0	0	0
50	634	10	0	0	0	0	0	0	0	0	0	0
60	301	5	0	0	0	0	0	0	0	0	0	0
70	433	7	0	0	0	0	0	0	0	0	0	0
80	337	6	0	0	0	0	0	0	0	0	0	0
90	219	4	0	0	0	0	0	0	0	0	0	0
100	344	6	0	0	0	0	0	0	0	0	0	0
110	213	4	0	0	0	0	0	0	0	0	0	0
120	313	5	0	0	0	0	0	0	0	0	0	0
130	188	3	0	0	0	0	0	0	0	0	0	0
140	220	4	0	0	0	0	0	0	0	0	0	0
150	151	3	0	0	0	0	0	0	0	0	0	0
160	135	2	0	0	0	0	0	0	0	0	0	0
170	148	2	0	0	0	0	0	0	0	0	0	0
180	106	2	0	0	0	0	0	0	0	0	0	0
190	114	2	0	0	0	0	0	0	0	0	0	0
200	57	1	0	0	0	0	0	0	0	0	0	0
210	71	1	0	0	0	0	0	0	0	0	0	0
220	47	1	0	0	0	0	0	0	0	0	0	0
230	31	1	0	0	0	0	0	0	0	0	0	0
240	31	1	0	0	0	0	0	0	0	0	0	0
250	9	0	0	0	0	0	0	0	0	0	0	0
260	13	0	0	0	0	0	0	0	0	0	0	0
270	5	0	0	0	0	0	0	0	0	0	0	0
280	5	0	0	0	0	0	0	0	0	0	0	0
290	4	0	0	0	0	0	0	0	0	0	0	0
300	3	0	0	0	0	0	0	0	0	0	0	0
320	1	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 320 = 0

NUMBER OF OBSERVATIONS = 5987

MEAN SPEED = 90 MM/SEC

FIG. 29A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 41-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 20, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 14.14/ 9/ 1/70 TO 3.47/20/ 2/70

MEAN DIR.	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I
0	166	3	0	0	0	0	0	0	0	0
5	137	2	0	0	0	0	0	0	0	0
10	117	2	0	0	0	0	0	0	0	0
15	94	2	0	0	0	0	0	0	0	0
20	146	3	0	0	0	0	0	0	0	0
25	100	2	0	0	0	0	0	0	0	0
30	82	1	0	0	0	0	0	0	0	0
35	57	1	0	0	0	0	0	0	0	0
40	80	1	0	0	0	0	0	0	0	0
45	49	1	0	0	0	0	0	0	0	0
50	56	1	0	0	0	0	0	0	0	0
55	50	1	0	0	0	0	0	0	0	0
60	48	1	0	0	0	0	0	0	0	0
65	55	1	0	0	0	0	0	0	0	0
70	47	1	0	0	0	0	0	0	0	0
75	34	1	0	0	0	0	0	0	0	0
80	46	1	0	0	0	0	0	0	0	0
85	33	1	0	0	0	0	0	0	0	0
90	37	1	0	0	0	0	0	0	0	0
95	64	1	0	0	0	0	0	0	0	0
100	44	1	0	0	0	0	0	0	0	0
105	39	1	0	0	0	0	0	0	0	0
110	52	1	0	0	0	0	0	0	0	0
115	71	1	0	0	0	0	0	0	0	0
120	71	1	0	0	0	0	0	0	0	0
125	97	2	0	0	0	0	0	0	0	0
130	94	2	0	0	0	0	0	0	0	0
135	108	2	0	0	0	0	0	0	0	0
140	159	3	0	0	0	0	0	0	0	0
145	214	4	0	0	0	0	0	0	0	0
150	187	3	0	0	0	0	0	0	0	0
155	215	4	0	0	0	0	0	0	0	0
160	165	3	0	0	0	0	0	0	0	0
165	162	3	0	0	0	0	0	0	0	0
170	159	3	0	0	0	0	0	0	0	0
175	137	2	0	0	0	0	0	0	0	0
180	113	2	0	0	0	0	0	0	0	0
185	130	2	0	0	0	0	0	0	0	0
190	119	2	0	0	0	0	0	0	0	0
195	86	1	0	0	0	0	0	0	0	0
200	44	1	0	0	0	0	0	0	0	0
205	42	1	0	0	0	0	0	0	0	0
210	62	1	0	0	0	0	0	0	0	0
215	46	1	0	0	0	0	0	0	0	0
220	34	1	0	0	0	0	0	0	0	0
225	43	1	0	0	0	0	0	0	0	0
230	20	0	0	0	0	0	0	0	0	0
235	18	0	0	0	0	0	0	0	0	0
240	18	0	0	0	0	0	0	0	0	0
245	20	0	0	0	0	0	0	0	0	0
250	36	1	0	0	0	0	0	0	0	0
255	17	0	0	0	0	0	0	0	0	0
260	18	0	0	0	0	0	0	0	0	0
265	29	0	0	0	0	0	0	0	0	0
270	32	1	0	0	0	0	0	0	0	0
275	30	1	0	0	0	0	0	0	0	0
280	38	1	0	0	0	0	0	0	0	0
285	42	1	0	0	0	0	0	0	0	0
290	30	1	0	0	0	0	0	0	0	0
295	32	1	0	0	0	0	0	0	0	0
300	44	1	0	0	0	0	0	0	0	0
305	67	1	0	0	0	0	0	0	0	0
310	52	1	0	0	0	0	0	0	0	0
315	81	1	0	0	0	0	0	0	0	0
320	100	2	0	0	0	0	0	0	0	0
325	104	2	0	0	0	0	0	0	0	0
330	136	2	0	0	0	0	0	0	0	0
335	158	3	0	0	0	0	0	0	0	0
340	178	3	0	0	0	0	0	0	0	0
345	214	4	0	0	0	0	0	0	0	0
350	182	3	0	0	0	0	0	0	0	0
355	136	2	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 5987

FIG. 29B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 41-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 20, 1970.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 14.14/ 9/ 1/70 TO 3.47/20/ 2/70

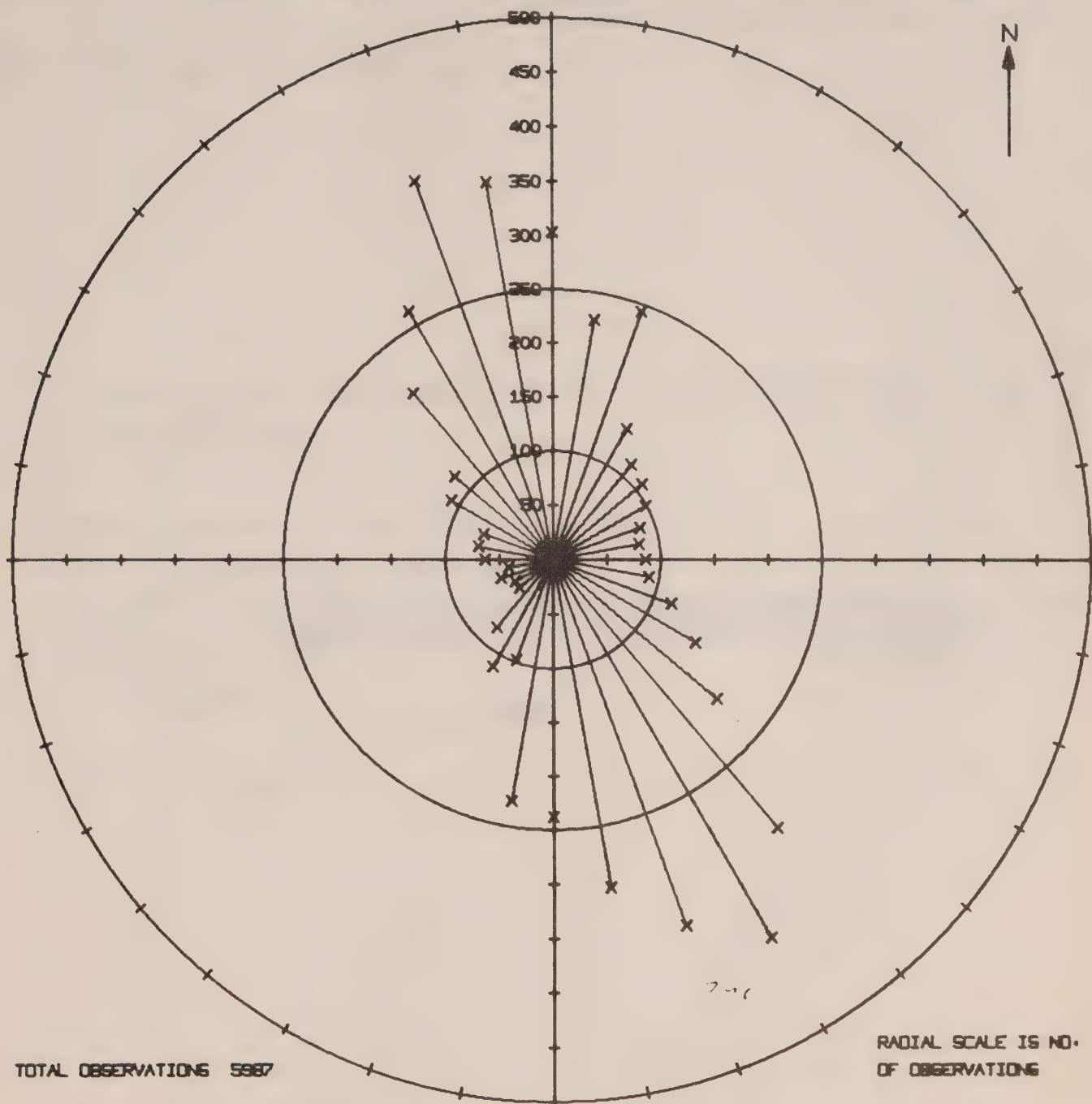


FIG. 29c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 41-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 20, 1970.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 14.14/ 9/ 1/70 TO 3.47/20/ 2/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	500 I	1000 I	1500 I	2000 I	2500 I	3000 I	3500 I	4000 I	4500 I	5000 I
8.00	0	0	0	0	0	0	0	0	0	0	0	0
8.05	0	0	0	0	0	0	0	0	0	0	0	0
8.10	0	0	0	0	0	0	0	0	0	0	0	0
8.15	0	0	0	0	0	0	0	0	0	0	0	0
8.20	0	0	0	0	0	0	0	0	0	0	0	0
8.25	0	0	0	0	0	0	0	0	0	0	0	0
8.30	0	0	0	0	0	0	0	0	0	0	0	0
8.35	0	0	0	0	0	0	0	0	0	0	0	0
8.40	0	0	0	0	0	0	0	0	0	0	0	0
8.45	0	0	0	0	0	0	0	0	0	0	0	0
8.50	0	0	0	0	0	0	0	0	0	0	0	0
8.55	0	0	0	0	0	0	0	0	0	0	0	0
8.60	0	0	0	0	0	0	0	0	0	0	0	0
8.65	0	0	0	0	0	0	0	0	0	0	0	0
8.70	0	0	0	0	0	0	0	0	0	0	0	0
8.75	1	0	0	0	0	0	0	0	0	0	0	0
8.80	14	0	0	0	0	0	0	0	0	0	0	0
8.85	68	1	0*	0	0	0	0	0	0	0	0	0
8.90	1138	19	0*****	0	0	0	0	0	0	0	0	0
8.95	4460	74	0*****	0	0	0	0	0	0	0	0	0
9.00	255	4	0*****	0	0	0	0	0	0	0	0	0
9.05	26	0	0*	0	0	0	0	0	0	0	0	0
9.10	12	0	0	0	0	0	0	0	0	0	0	0
9.15	4	0	0	0	0	0	0	0	0	0	0	0
9.20	1	0	0	0	0	0	0	0	0	0	0	0
9.25	1	0	0	0	0	0	0	0	0	0	0	0
9.30	7	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 9.30 = 0

NUMBER OF OBSERVATIONS = 5987

MEAN TEMP = 8.94 DEG. C.

FIG. 29d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 41-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 20, 1970.

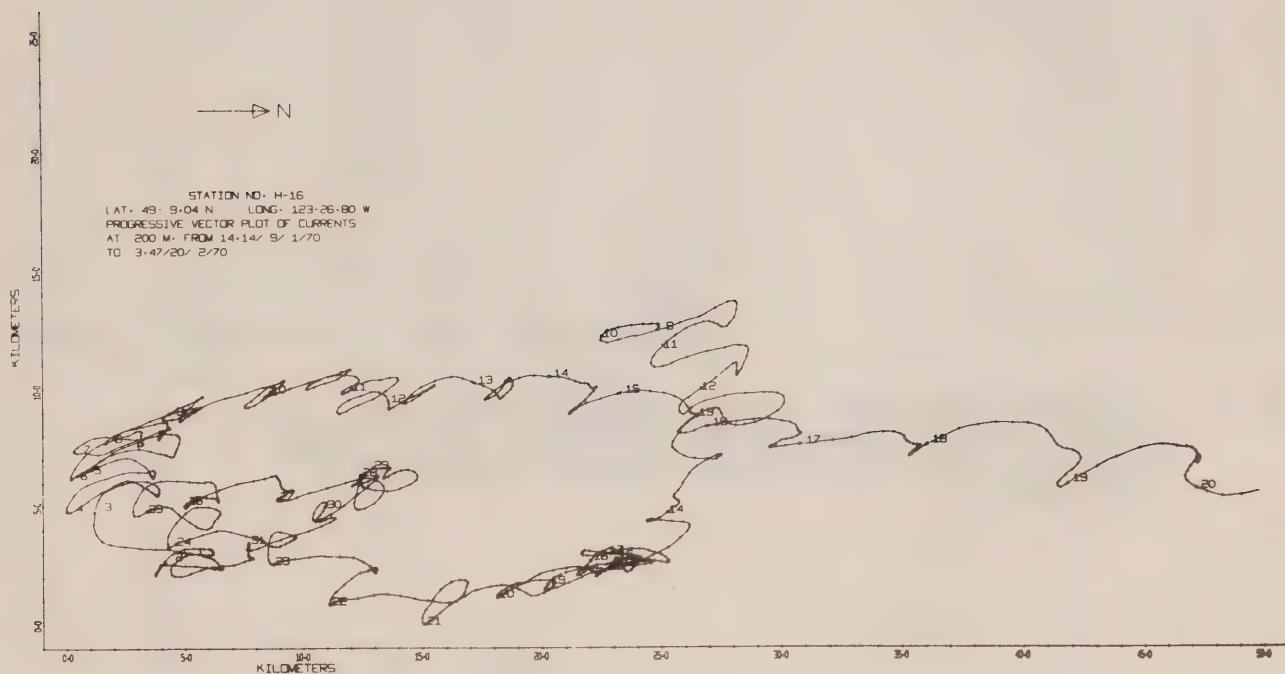


Fig. 29e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 41-day period during January 9 through February 20, 1970. The spatial scale corresponds to the displacement that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 11.52/20/ 2/70 TO 9. 5/25/ 3/70

MEAN SPEED	FREQUENCY NO.	PCT.	I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	0	0	0										
10	355	7	0	*****									
20	142	3	0	*****									
30	242	5	0	*****									
40	529	11	0	*****									
50	364	8	0	*****									
60	558	12	0	*****									
70	327	7	0	*****									
80	436	9	0	*****									
90	242	5	0	*****									
100	188	4	0	*****									
110	268	6	0	*****									
120	141	3	0	*****									
130	202	4	0	*****									
140	124	3	0	*****									
150	161	3	0	*****									
160	70	1	0	*****									
170	62	1	0	*****									
180	90	2	0	*****									
190	41	1	0	****									
200	70	1	0	*****									
210	27	0	0	**									
220	29	1	0	***									
230	17	0	0	**									
240	17	0	0	**									
250	23	0	0	**									
260	10	0	0	*									
270	6	0	0	*									
280	1	0	0										

NUMBER OF SPEEDS GREATER THAN 280 = 0

NUMBER OF OBSERVATIONS = 4737

MEAN SPEED = 81 MM/SEC

FIG. 30A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING FEBRUARY 20 THROUGH MARCH 25, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 11.52/20/ 2/70 TO 9. 5/25/ 3/70

MEAN DIR.	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I
0	177	4	0	0	0	0	0	0	0	0
5	150	3	0	0	0	0	0	0	0	0
10	107	2	0	0	0	0	0	0	0	0
15	56	1	0	0	0	0	0	0	0	0
20	53	1	0	0	0	0	0	0	0	0
25	40	1	0	0	0	0	0	0	0	0
30	50	1	0	0	0	0	0	0	0	0
35	35	1	0	0	0	0	0	0	0	0
40	35	1	0	0	0	0	0	0	0	0
45	31	1	0	0	0	0	0	0	0	0
50	23	1	0	0	0	0	0	0	0	0
55	26	1	0	0	0	0	0	0	0	0
60	23	0	0	0	0	0	0	0	0	0
65	24	1	0	0	0	0	0	0	0	0
70	20	0	0	0	0	0	0	0	0	0
75	31	1	0	0	0	0	0	0	0	0
80	23	0	0	0	0	0	0	0	0	0
85	38	1	0	0	0	0	0	0	0	0
90	25	1	0	0	0	0	0	0	0	0
95	20	1	0	0	0	0	0	0	0	0
100	37	1	0	0	0	0	0	0	0	0
105	24	1	0	0	0	0	0	0	0	0
110	34	1	0	0	0	0	0	0	0	0
115	44	1	0	0	0	0	0	0	0	0
120	64	1	0	0	0	0	0	0	0	0
125	59	1	0	0	0	0	0	0	0	0
130	77	2	0	0	0	0	0	0	0	0
135	82	2	0	0	0	0	0	0	0	0
140	91	2	0	0	0	0	0	0	0	0
145	131	2	0	0	0	0	0	0	0	0
150	161	3	0	0	0	0	0	0	0	0
155	144	3	0	0	0	0	0	0	0	0
160	142	3	0	0	0	0	0	0	0	0
165	129	3	0	0	0	0	0	0	0	0
170	129	3	0	0	0	0	0	0	0	0
175	101	2	0	0	0	0	0	0	0	0
180	75	2	0	0	0	0	0	0	0	0
185	35	2	0	0	0	0	0	0	0	0
190	71	1	0	0	0	0	0	0	0	0
195	51	1	0	0	0	0	0	0	0	0
200	55	1	0	0	0	0	0	0	0	0
205	43	1	0	0	0	0	0	0	0	0
210	2	1	0	0	0	0	0	0	0	0
215	40	1	0	0	0	0	0	0	0	0
220	34	1	0	0	0	0	0	0	0	0
225	19	0	0	0	0	0	0	0	0	0
230	19	0	0	0	0	0	0	0	0	0
235	19	0	0	0	0	0	0	0	0	0
240	37	1	0	0	0	0	0	0	0	0
245	21	0	0	0	0	0	0	0	0	0
250	23	0	0	0	0	0	0	0	0	0
255	17	0	0	0	0	0	0	0	0	0
260	26	1	0	0	0	0	0	0	0	0
265	19	0	0	0	0	0	0	0	0	0
270	28	1	0	0	0	0	0	0	0	0
275	14	0	0	0	0	0	0	0	0	0
280	15	0	0	0	0	0	0	0	0	0
285	17	0	0	0	0	0	0	0	0	0
290	32	1	0	0	0	0	0	0	0	0
295	20	0	0	0	0	0	0	0	0	0
300	39	1	0	0	0	0	0	0	0	0
305	58	1	0	0	0	0	0	0	0	0
310	67	1	0	0	0	0	0	0	0	0
315	84	2	0	0	0	0	0	0	0	0
320	73	2	0	0	0	0	0	0	0	0
325	99	2	0	0	0	0	0	0	0	0
330	134	3	0	0	0	0	0	0	0	0
335	180	4	0	0	0	0	0	0	0	0
340	176	4	0	0	0	0	0	0	0	0
345	171	4	0	0	0	0	0	0	0	0
350	208	4	0	0	0	0	0	0	0	0
355	169	4	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 4737

FIG. 30B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING FEBRUARY 20 THROUGH MARCH 25, 1970.

STATION NO. H-16 LAT. 49° 04' N LONG. 123° 26' 00" W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 11:52/20/ 2/70 TO 9: 5/25/ 3/70

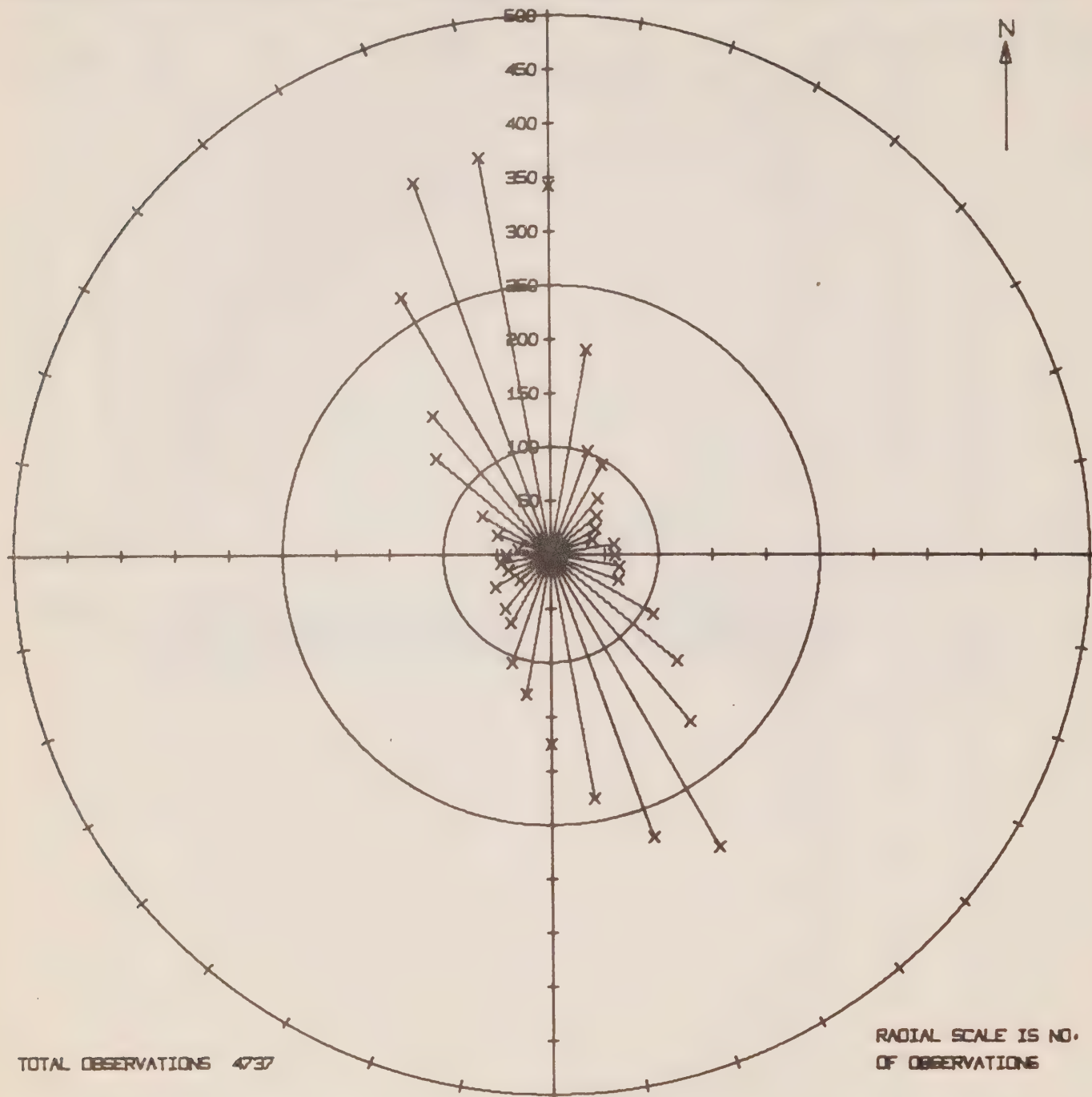


FIG. 30c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING FEBRUARY 20 THROUGH MARCH 25, 1970.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. C.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD: FROM 11/52/20/ 2/70 TO 3/5/25/ 3/70

TEMP.	FREQUENCY	200	400	600	800	1000	1200	1400	1600	1800	2000
NO.	NO.	I	I	I	I	I	I	I	I	I	I
1.00	1	0	0	0	0	0	0	0	0	0	0
1.05	0	0	0	0	0	0	0	0	0	0	0
1.10	0	0	0	0	0	0	0	0	0	0	0
1.15	0	0	0	0	0	0	0	0	0	0	0
1.20	0	0	0	0	0	0	0	0	0	0	0
1.25	0	0	0	0	0	0	0	0	0	0	0
1.30	0	0	0	0	0	0	0	0	0	0	0
1.35	0	0	0	0	0	0	0	0	0	0	0
1.40	0	0	0	0	0	0	0	0	0	0	0
1.45	0	0	0	0	0	0	0	0	0	0	0
1.50	24	1	0	0	0	0	0	0	0	0	0
1.55	124	3	0	0	0	0	0	0	0	0	0
1.60	455	9	0	0	0	0	0	0	0	0	0
1.65	799	21	0	0	0	0	0	0	0	0	0
1.70	1747	44	0	0	0	0	0	0	0	0	0
1.75	1134	23	0	0	0	0	0	0	0	0	0
1.80	240	6	0	0	0	0	0	0	0	0	0
1.85	12	1	0	0	0	0	0	0	0	0	0
1.90	1	0	0	0	0	0	0	0	0	0	0
1.95	1	0	0	0	0	0	0	0	0	0	0
2.00	1	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 2.00 = 0 NUMBER OF OBSERVATIONS = 4737 MEAN TEMP = 8.69 DEG. C.

FIG. 30d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING FEBRUARY 20 THROUGH MARCH 25, 1970.

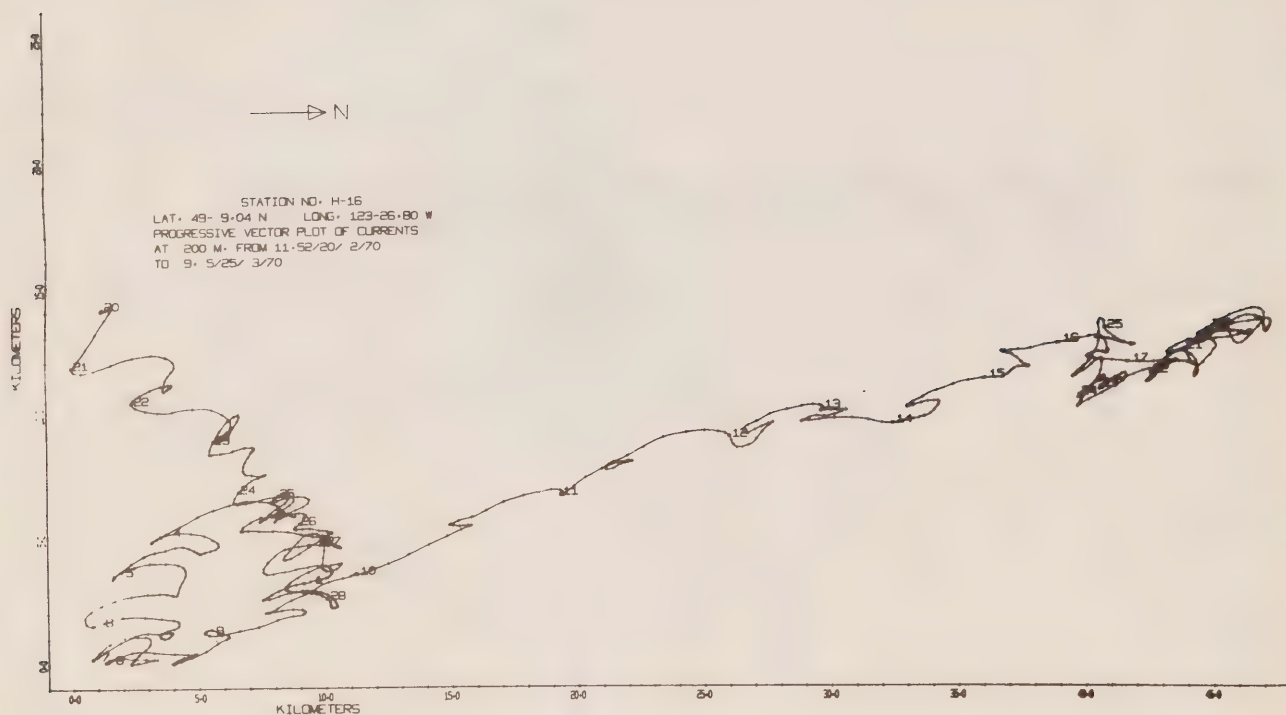


Fig. 30e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 33-day period during February 20 through March 25, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION: 103-26.80 W

RECORDS AT A DEPTH OF 200 METRES
 DATE: 11.33/25/ 3/70 TO 3.39/28/ 4/70

SPD	FREQ	PERC	100	200	300	400	500	600	700	800	900	1000
MM/SEC			I	I	I	I	I	I	I	I	I	I
0	153	2	0	0	0	0	0	0	0	0	0	0
10	34	1	0	0	0	0	0	0	0	0	0	0
20	139	3	0	0	0	0	0	0	0	0	0	0
30	316	6	0	0	0	0	0	0	0	0	0	0
40	32	7	0	0	0	0	0	0	0	0	0	0
50	521	11	0	0	0	0	0	0	0	0	0	0
60	344	7	0	0	0	0	0	0	0	0	0	0
70	491	10	0	0	0	0	0	0	0	0	0	0
80	297	6	0	0	0	0	0	0	0	0	0	0
90	236	5	0	0	0	0	0	0	0	0	0	0
100	334	7	0	0	0	0	0	0	0	0	0	0
110	20	0	0	0	0	0	0	0	0	0	0	0
120	287	6	0	0	0	0	0	0	0	0	0	0
130	165	3	0	0	0	0	0	0	0	0	0	0
140	201	4	0	0	0	0	0	0	0	0	0	0
150	114	2	0	0	0	0	0	0	0	0	0	0
160	113	2	0	0	0	0	0	0	0	0	0	0
170	149	3	0	0	0	0	0	0	0	0	0	0
180	78	2	0	0	0	0	0	0	0	0	0	0
190	59	1	0	0	0	0	0	0	0	0	0	0
200	44	1	0	0	0	0	0	0	0	0	0	0
210	61	1	0	0	0	0	0	0	0	0	0	0
220	5	1	0	0	0	0	0	0	0	0	0	0
230	32	1	0	0	0	0	0	0	0	0	0	0
240	42	1	0	0	0	0	0	0	0	0	0	0
250	21	0	0	0	0	0	0	0	0	0	0	0
260	23	0	0	0	0	0	0	0	0	0	0	0
270	17	0	0	0	0	0	0	0	0	0	0	0
280	17	0	0	0	0	0	0	0	0	0	0	0
290	7	0	0	0	0	0	0	0	0	0	0	0
300	7	0	0	0	0	0	0	0	0	0	0	0
310	1	0	0	0	0	0	0	0	0	0	0	0
320	2	0	0	0	0	0	0	0	0	0	0	0
330	2	0	0	0	0	0	0	0	0	0	0	0
340	2	0	0	0	0	0	0	0	0	0	0	0
350	2	0	0	0	0	0	0	0	0	0	0	0
360	2	0	0	0	0	0	0	0	0	0	0	0
370	2	0	0	0	0	0	0	0	0	0	0	0
380	2	0	0	0	0	0	0	0	0	0	0	0
390	2	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 390 = 0

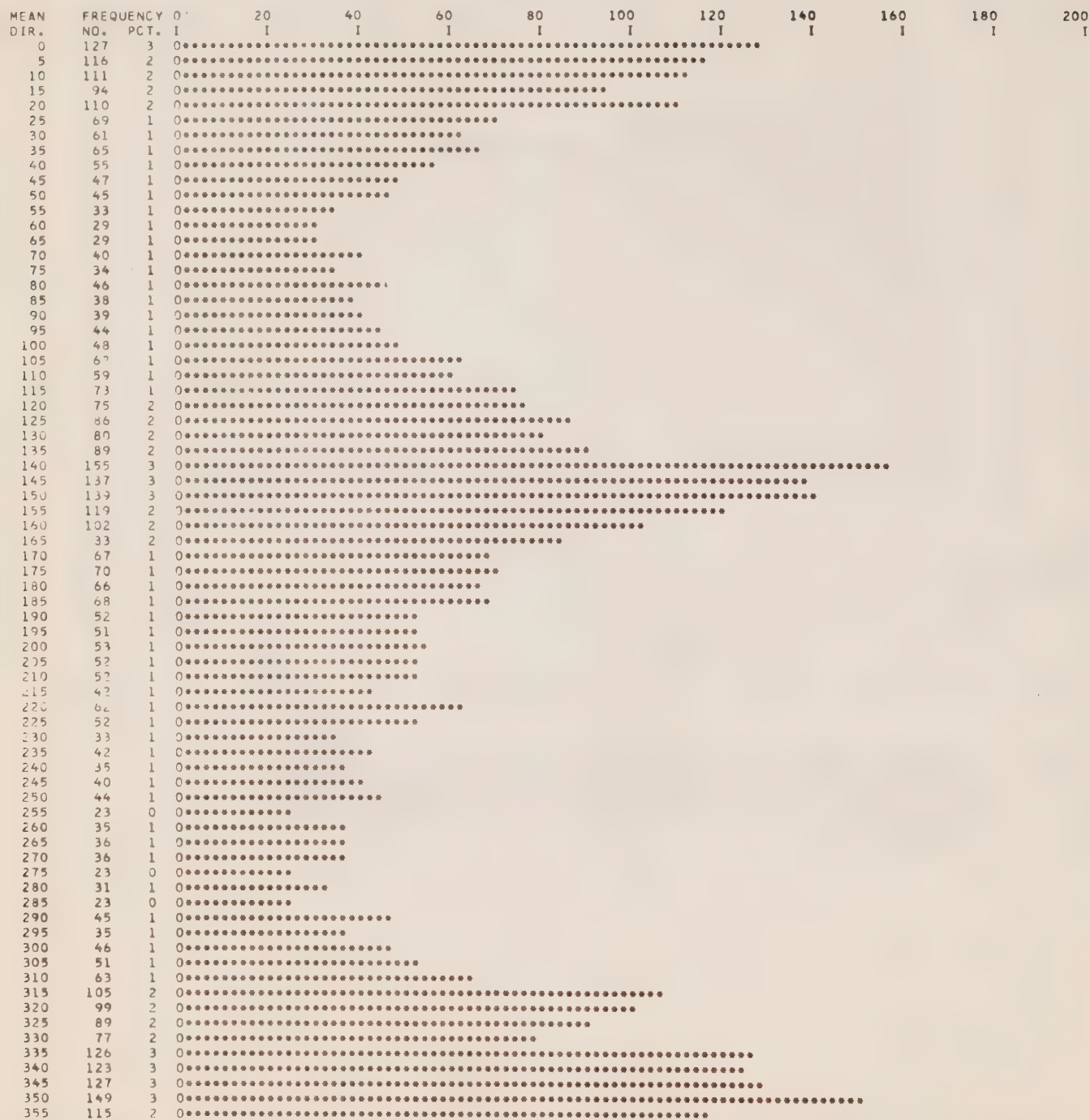
NUMBER OF OBSERVATIONS = 4677

MEAN SPEED = 103 MM/SEC

FIG. 31A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MARCH 25 THROUGH APRIL 28, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 11.55/25/ 3/70 TO 8.39/28/ 4/70



NUMBER OF OBSERVATIONS = 4877

FIG. 31b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MARCH 25 THROUGH APRIL 28, 1970.

STATION NO. H-16 LAT. 49° 9.04' N LONG. 123° 26.80' W
DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 11.55/25/ 3/70 TO 8.39/28/ 4/70

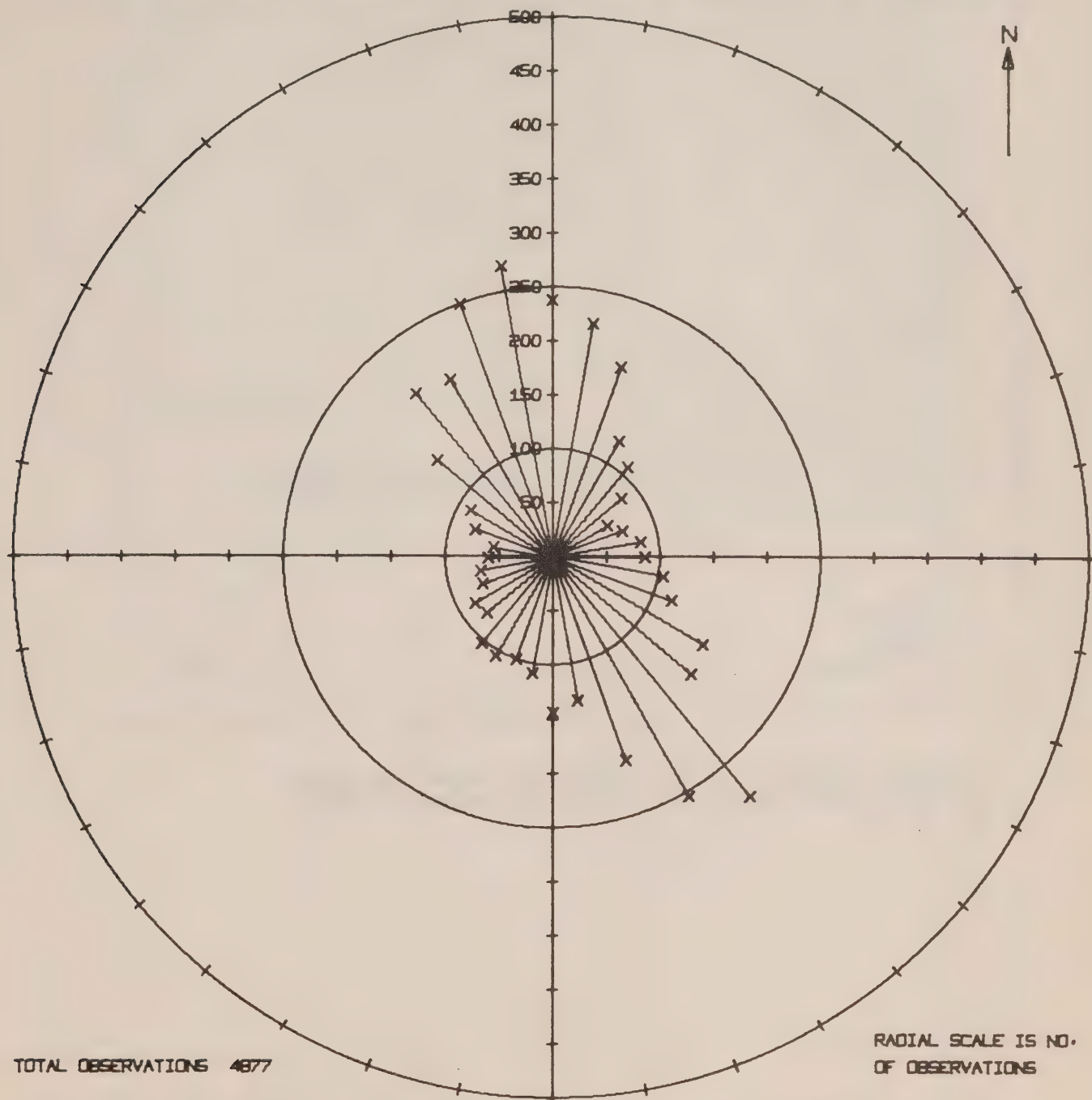


FIG. 31c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MARCH 25 THROUGH APRIL 28, 1970.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 11.55/25/ 3/70 TO 8.39/28/ 4/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
7.90	0	0										
7.95	0	0										
7.10	0	0										
7.15	0	0										
7.20	0	0										
7.25	0	0										
7.30	0	0										
7.35	0	0										
7.40	0	0										
7.45	0	0										
7.50	0	0										
7.55	0	0										
7.60	0	0										
7.65	0	0										
7.70	0	0										
7.75	0	0										
7.80	0	0										
7.85	0	0										
7.90	2	0										
7.95	2	0										
8.00	3	0										
8.05	155	3	0	0	0	0	0	0	0	0	0	0
8.10	321	7	0	0	0	0	0	0	0	0	0	0
8.15	331	7	0	0	0	0	0	0	0	0	0	0
8.20	247	6	0	0	0	0	0	0	0	0	0	0
8.25	289	6	0	0	0	0	0	0	0	0	0	0
8.30	230	5	0	0	0	0	0	0	0	0	0	0
8.35	262	5	0	0	0	0	0	0	0	0	0	0
8.40	315	6	0	0	0	0	0	0	0	0	0	0
8.45	293	6	0	0	0	0	0	0	0	0	0	0
8.50	327	7	0	0	0	0	0	0	0	0	0	0
8.55	732	15	0	0	0	0	0	0	0	0	0	0
8.60	754	15	0	0	0	0	0	0	0	0	0	0
8.65	285	6	0	0	0	0	0	0	0	0	0	0
8.70	219	4	0	0	0	0	0	0	0	0	0	0
8.75	4	0	0	0	0	0	0	0	0	0	0	0
8.80	30	1	0	0	0	0	0	0	0	0	0	0
8.85	0	0	0	0	0	0	0	0	0	0	0	0
8.90	0	0	0	0	0	0	0	0	0	0	0	0
8.95	0	0	0	0	0	0	0	0	0	0	0	0
9.00	6	0	0	0	0	0	0	0	0	0	0	0
9.05	2	0	0	0	0	0	0	0	0	0	0	0
9.10	2	0	0	0	0	0	0	0	0	0	0	0
9.15	6	0	0	0	0	0	0	0	0	0	0	0
9.20	20	0	0	0	0	0	0	0	0	0	0	0
9.25	3	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 9.25 = 0

NUMBER OF OBSERVATIONS = 4877

MEAN TEMP = 8.42 DEG. C.

FIG. 31d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MARCH 25 THROUGH APRIL 28, 1970.

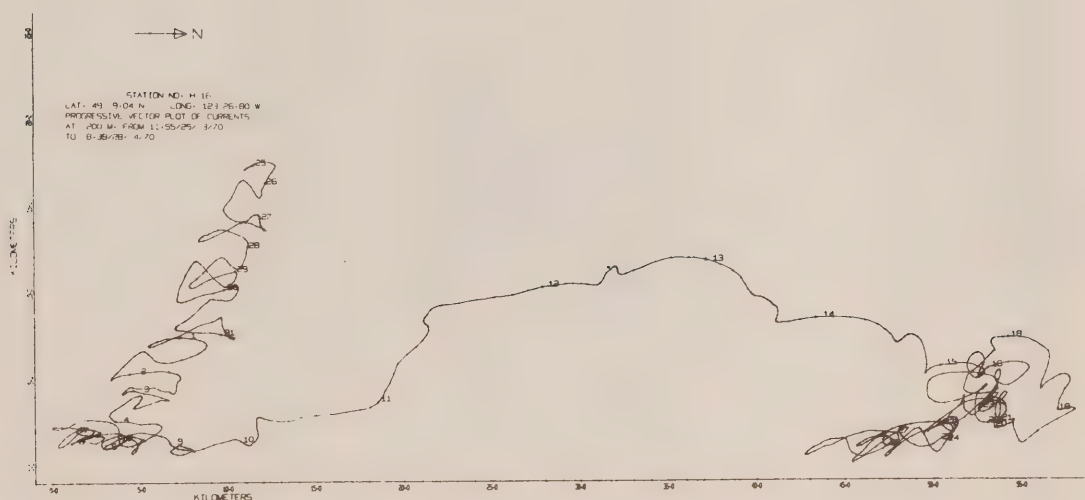


Fig. 31e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 34-day period during March 25 through April 28, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 10.44/23/ 4/77 TO 11.55/10/ 6/70

MEAN SPEED	FREQUENCY NO.	PCT.	100	200	300	400	500	600	700	800	900	1000
0	0	0	1	1	1	1	1	1	1	1	1	1
10	12	0.06										
20	14	0.07										
30	3	0.01										
40	14	0.07										
50	21	0.11										
60	87	0.45										
70	125	0.65										
80	242	1.26										
90	256	1.33										
100	251	1.29										
110	450	2.35										
120	517	2.69										
130	644	3.36										
140	214	1.11										
150	633	3.30										
160	415	2.16										
170	357	1.86										
180	435	2.27										
190	241	1.25										
200	349	1.82										
210	172	0.89										
220	140	0.72										
230	83	0.42										
240	82	0.42										
250	110	0.56										
260	41	0.21										
270	35	0.18										
280	25	0.12										
290	29	0.14										
300	10	0.05										
310	17	0.08										
320	20	0.10										
330	4	0.02										
340	14	0.07										
350	7	0.03										
360	11	0.05										
370	4	0.02										
380	2	0.01										
390	4	0.02										
400	0	0.00										
410	0	0.00										
420	0	0.00										
430	0	0.00										
440	0	0.00										
450	0	0.00										
460	0	0.00										
470	0	0.00										
480	0	0.00										
490	0	0.00										
500	0	0.00										
510	0	0.00										
520	0	0.00										
530	0	0.00										
540	0	0.00										
550	0	0.00										
560	0	0.00										
570	0	0.00										
580	0	0.00										
590	0	0.00										
600	0	0.00										
610	0	0.00										
620	0	0.00										
630	0	0.00										
640	0	0.00										
650	0	0.00										
660	0	0.00										
670	0	0.00										
680	0	0.00										
690	1	0.00										
700	0	0.00										
710	0	0.00										
720	0	0.00										
730	0	0.00										
740	0	0.00										
750	0	0.00										
760	0	0.00										
770	0	0.00										
780	0	0.00										
790	0	0.00										
800	0	0.00										
810	0	0.00										
820	0	0.00										
830	0	0.00										
840	0	0.00										
850	0	0.00										
860	0	0.00										
870	0	0.00										
880	0	0.00										
890	0	0.00										
900	0	0.00										
910	0	0.00										
920	0	0.00										
930	0	0.00										
940	0	0.00										
950	0	0.00										
960	0	0.00										
970	0	0.00										
980	0	0.00										
990	0	0.00										

NUMBER OF SPEEDS GREATER THAN 990 = 1

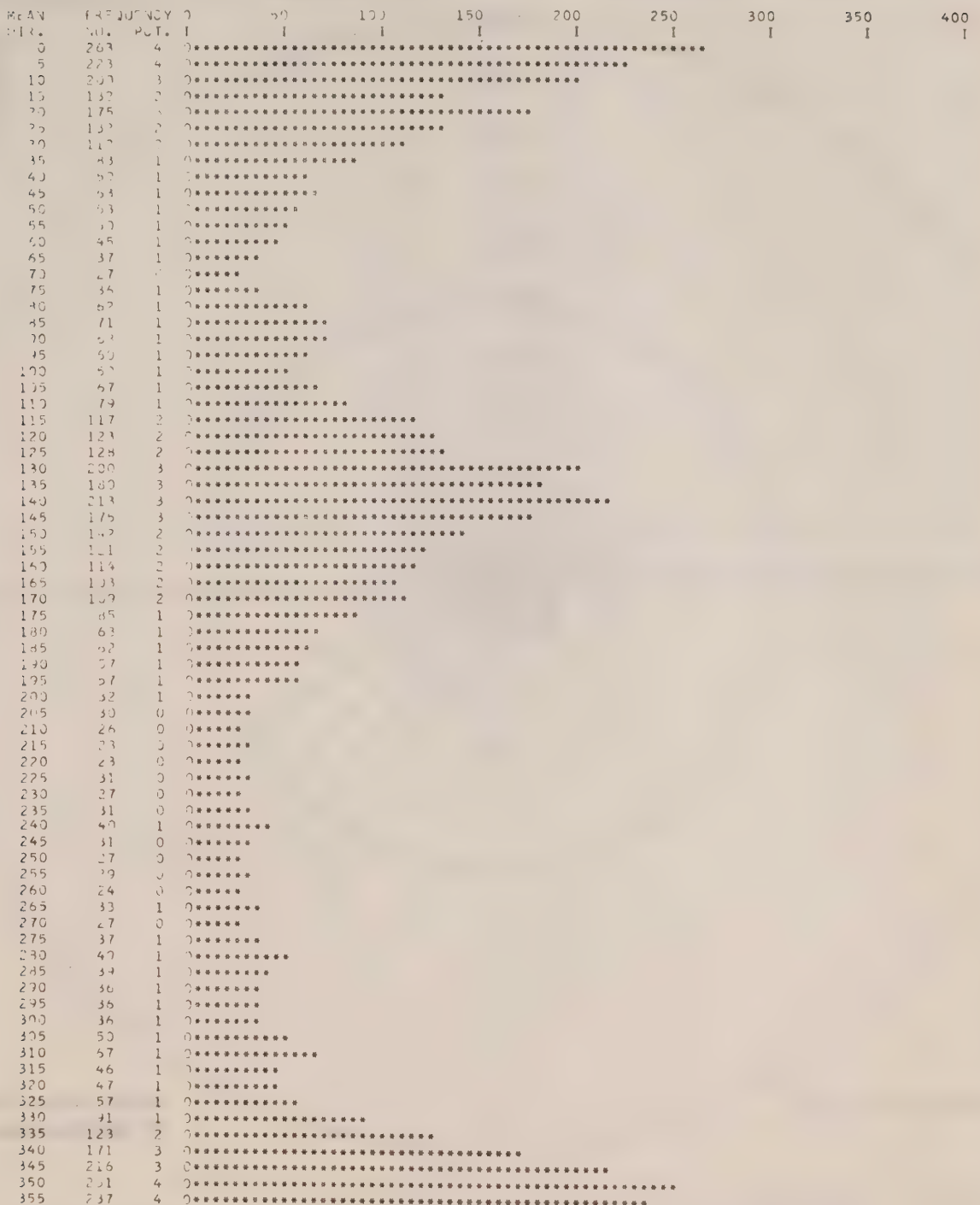
NUMBER OF OBSERVATIONS = 6224

MEAN SPEED = 153 MM/SEC

FIG. 32A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING APRIL 28 THROUGH JUNE 10, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-16 LAT. 49- 9.04 N LONG. 123-26.80 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 200 METRES
OBSERVATION PERIOD, FROM 10.48/24/ 4/70 TO 11.55/10/ 6/70



NUMBER OF OBSERVATIONS = 6224

FIG. 32B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING APRIL 28 THROUGH JUNE 10, 1970.

STATION NO. H-15 LAT. 49-9.04 N LONG. 123-25.80 W
 DIRECTION HISTOGRAM FOR CURRENTS AT 200 M. FROM 10-48/28/ 4/70 TO 11-55/10/ 6/70

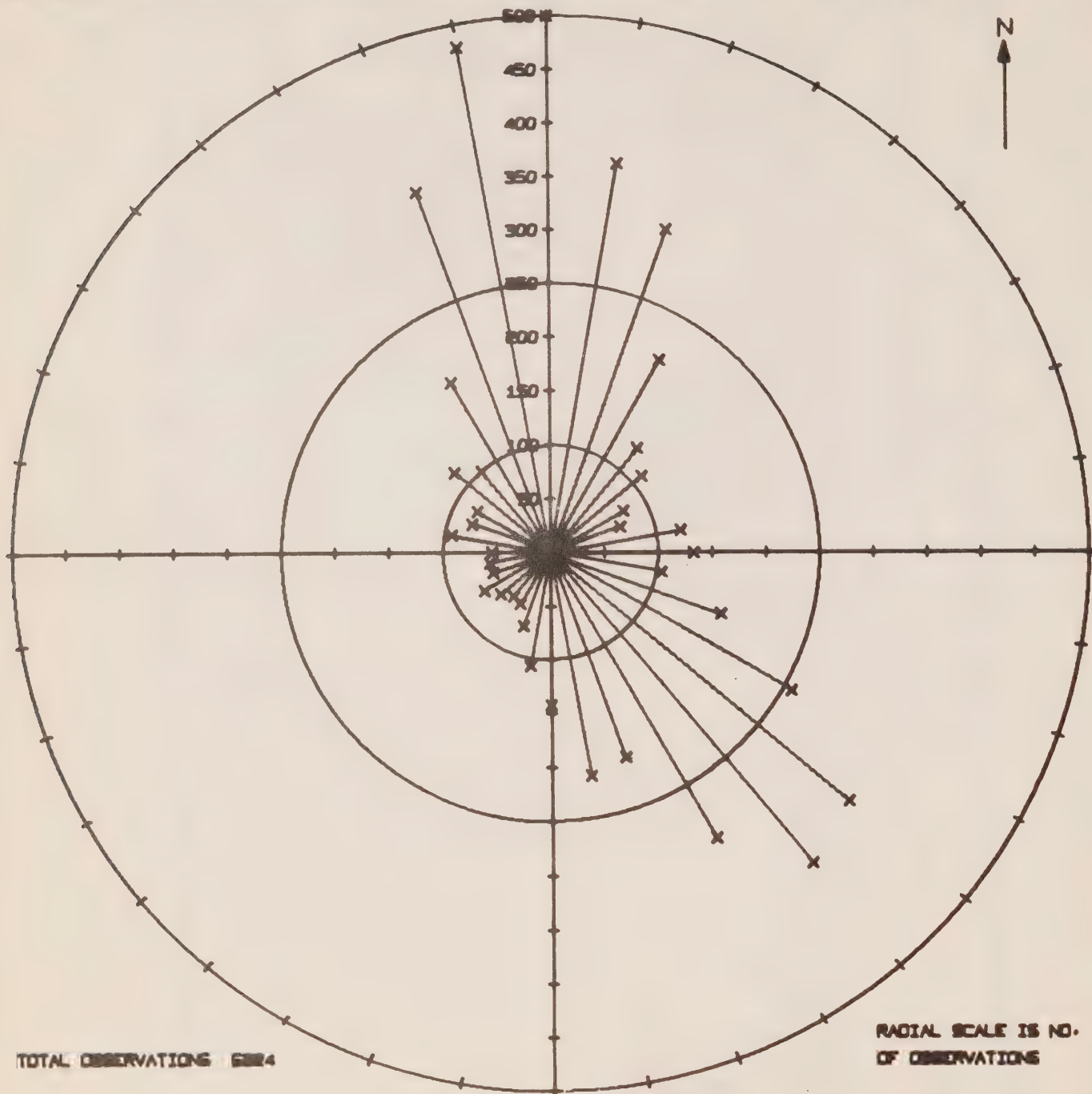


FIG. 32c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING APRIL 28 THROUGH JUNE 10, 1970.

STATION NO. H-16 LAT. 49- 9.24 N LONG. 123-26.80 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 200 METERS
OBSERVATION PERIOD, FROM 10.43/05/ 4/70 TO 11.55/10/ 6/70

MEAN TEMP.	FREQUENCY NO.	PCT. PCT.	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I	1600 I	1800 I	2000 I
7.00	0	0	0									
7.05	0	0	0									
7.10	0	0	0									
7.15	0	0	0									
7.20	0	0	0									
7.25	0	0	0									
7.30	2	0	0									
7.35												
7.40												
7.45												
7.50	0	0	0									
7.55	0	0	0									
7.60	0	0	0									
7.65	1	0	0									
7.70	0	0	0									
7.75	0	0	0									
7.80	0	0	0									
7.85	0	0	0									
7.90	4	0	0									
7.95	0	0	0									
8.00	0	0	0									
8.05	1	0	0									
8.10	6	0	0									
8.15	346	6	0	*****								
8.20	724	12	0	*****								
8.25	1730	29	0	*****								
8.30	903	15	0	*****								
8.35	363	6	0	*****								
8.40	116	2	0	*****								
8.45	97	2	0	*****								
8.50		2	0	*****								
8.55												
8.60		0	0									
8.65	8	0	0									
8.70	19	0	0*									
8.75	81	1	0	*****								
8.80	86	1	0	*****								
8.85	20	0	0*									
8.90	14	0	0*									
8.95		1	0	*****								
9.00		1										
9.05	50	1	0	***								
9.10	50	1	0	***								
9.15	130	2	0	*****								
9.20	323	5	0	*****								
9.25	632	10	0	*****								
9.30	44	1	0	**								
9.35	33	1	0	**								
9.40	1	0	0									
9.45	0	0	0									
9.50	0	0	0									
9.55	0	0	0									
9.60	0	0	0									
9.65		0	0									
9.70												
9.75		0	0									
9.80	0	0	0									
9.85	0	0	0									
9.90	0	0	0									
9.95	0	0	0									
10.00	0	0	0									
10.05	0	0	0									
10.10	0	0	0									

NUMBER OF TEMP. GREATER THAN 10.15 = 0

NUMBER OF OBSERVATIONS = 6224

MEAN TEMP = 8.50 DEG. C.

FIG. 32b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 43-DAY PERIOD DURING APRIL 28 THROUGH JUNE 10, 1970.

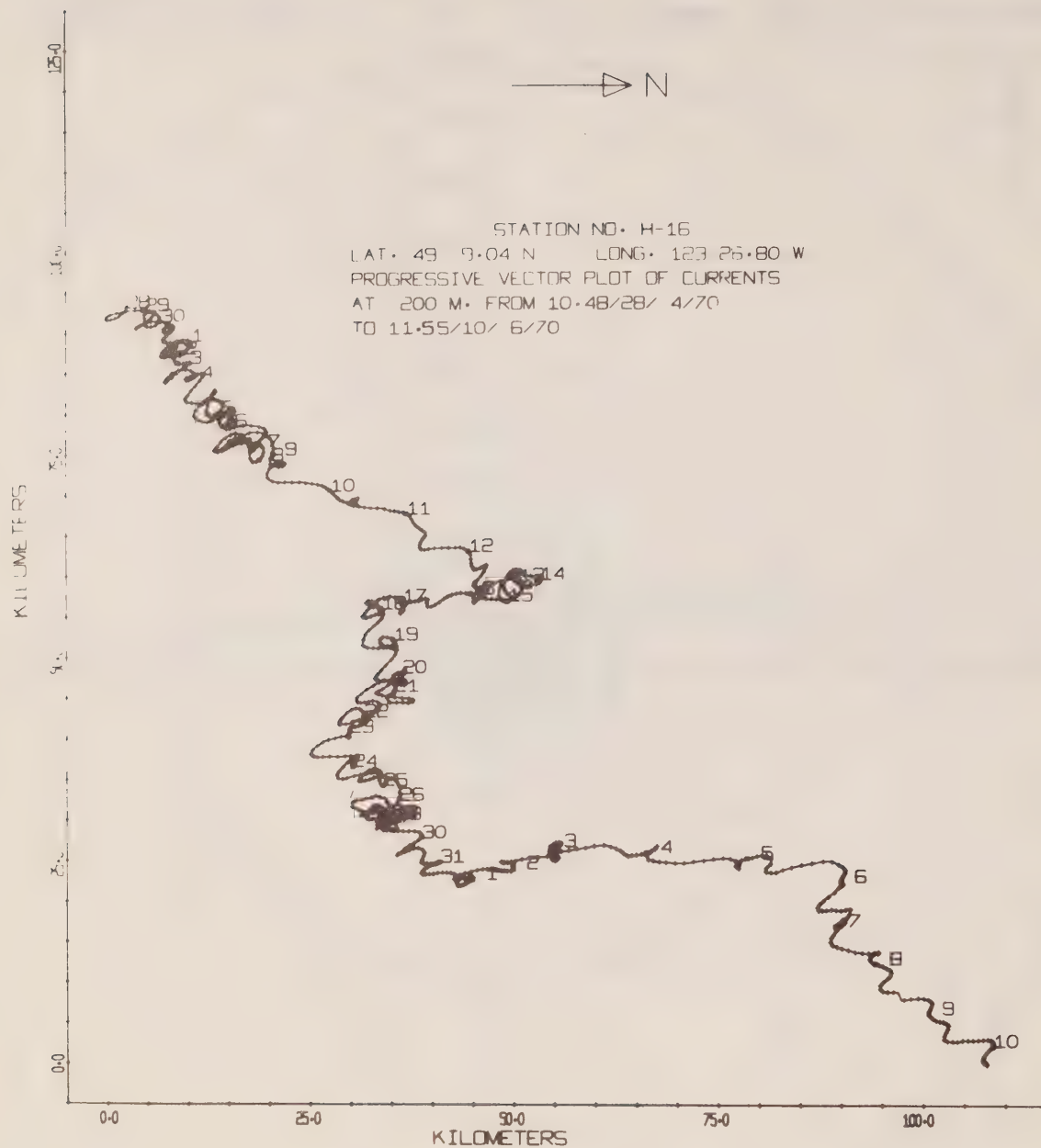
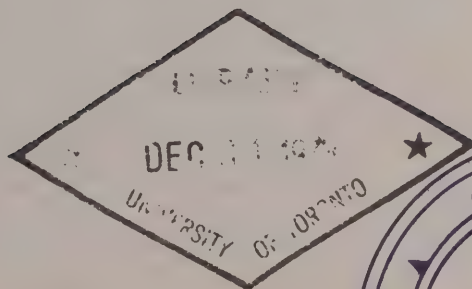


Fig. 32e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 43-day period during April 28 through June 10, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

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**SUMMARY OF OCEANOGRAPHIC RECORDS
OBTAINED FROM MOORED INSTRUMENTS
IN THE STRAIT OF GEORGIA — 1969-1970
Current Velocity and Seawater Temperature
from Station H-26**

S. Tabata, J.A. Stickland



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MARINE SCIENCES BRANCH, PACIFIC REGION
PACIFIC MARINE SCIENCE REPORT NO. 72-9

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S. Tabata and J.A. Stickland

Victoria, B.C.
Marine Sciences Branch, Pacific Region
Environment Canada

May, 1972

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INTRODUCTION

The waters of the Strait of Georgia have been the subject of many oceanographic studies for more than half a century. The earlier studies of the region consisted mainly of physical, chemical and biological oceanographic descriptions of the waters and some of the main factors affecting the properties of the waters therein. The studies vary, in scope, from a brief initial description of the waters by Fraser and Cameron (1916) and a more detailed work by Hutchinson and Lucas (1931) and to a more complete treatment by Waldichuk (1957), to name a few.

In spite of the number of oceanographic studies made on these waters there was a notable lack of reliable information of the surface and subsurface circulation in the Strait. In order to relieve this deficiency, the Pacific Oceanographic Group embarked on a limited program of current velocity observations in the central portion of the Strait of Georgia. The initial observations consisted only of surface drift measurements, the results of which have already been reported (Giovando and Tabata, 1970) and a series of velocity profile measurements from anchored vessels, the results of which have also been reported (Tabata, Stickland, Wong and Giovando, 1970 (a); 1970(b); 1970(c)).

In recent years the marine technology associated with automated oceanographic observations from moored instruments has advanced to the stage where it is now possible to obtain reliable data from unattended instruments for periods exceeding one month. The present series of observations to be reported here are based on data obtained from such instruments.

The primary objective of the present program of observations is to obtain current velocity records at sufficiently high frequency and of sufficient length so that it would be possible to examine the spectrum of the variability of current velocities in the frequency band between 1 cycle and 10^{-3} cycle per hour (period of few hours to few months approximately), at a representative area of the central Strait. Such data would provide, in addition to basic scientific information, solid background material that would be useful in a variety of applied oceanographic studies such as those associated with pollution and fisheries. As most of the instruments employed recorded temperatures of the water as well as current velocities, they too are reported.

A report describing the observational program, performances of current meters used, mooring technique, computer data-processing method, etc. has already been published in the Technical Report Series of the Fisheries Research Board of Canada (Tabata, Stickland and de Lange Boom, 1971). The summaries of observations obtained from Stations H-06 and H-16 have already been published in Pacific Marine Science Reports No. 72-7 and 72-8 respectively (Tabata and Stickland, 1972).

The present report comprises the summary of current velocity measurements obtained from Station H-26. It is the fourth of a series of reports associated with the program of oceanographic observations from moored instruments in the Strait of Georgia to be issued.

The summary contains:

- 1) histogram of current speed
- 2) histogram of current direction
- 3) histogram of current direction in polar form
- 4) histogram of temperature (if applicable)
- 5) progressive vector diagram of current velocities

Local standard time, Pacific Standard Time (P.S.T.), is used throughout (time zone + 8).

BACKGROUND INFORMATION

The only current measurements made in the open waters of the Strait, prior to 1953, were by means of drift bottles. They were carried out under the direction of Dr. W.A. Clemens. The data so obtained have been used later to interpret the surface circulation in the Strait of Georgia, (Waldichuk, 1957; Waldichuk, 1958).

In 1953, for the first time in the Strait, current observations were made at 8 fixed locations in the Strait from an anchored ship (Waldichuk, 1957). They were generally taken at hourly intervals at selected depths for a period of one tidal day (25 hours) at each station. While surface currents were observed by means of a customary captive drift pole, subsurface currents were measured with an Ekman Current Meter.

A year later, a series of 6 stations was occupied between Tsawwassen and Galiano Island (Fig. 1) and surface and bottom currents were measured for one tidal day at each of the stations (Pickard, 1956). The surface currents were observed at half-hourly intervals utilizing a drift pole while the bottom currents were measured with an Ekman Current Meter at hourly intervals.

During the summer of 1963 a series of 3 stations in a line between Nanaimo and Sechart (Fig. 1) was occupied by the Canadian Hydrographic Service and currents were measured at depths of 5, 100 and 300 metres (m) with self-recording BBT (Neyrpic) current metres (analogue output) at each of these stations at 20-minute intervals for period up to 30 days (Huggett, 1966). The method used to obtain the data represents a significant improvement over previous methods. However, even when currents were measured in this manner, the results indicated inconsistency in the day-to-day flow patterns although the 15-day averages did indicated the presence of clockwise rotary tidal currents.

LOCATION OF STATIONS

A line of 3 stations, H-06, H-16 and H-26, placed 10 kilometres (km) apart, was established between Valdes Island to the west and Point Grey to the east in April 1969 (Fig. 1). They remained stationed until the completion of the survey in September 1970. As is evident from Fig. 2, the western half of the line is deeper than the eastern side, the maximum depth being located a few kilometres east of Station H-06. The small ridge shown to the east of Station H-16 is part of a shoal having a minimum depth of 146m and situated within a few kilometres to the southeast of the ridge shown in the Figure.

The positions* and the depths of the 3 stations are:

H-06	Latitude 49°06.23'N Longitude 123° 33.70'W Depth 252m
H-16	Latitude 49° 09.07'N Longitude 123° 26.75'W Depth 295m
H-26	Latitude 49° 11.93'N Longitude 123° 19.80'W Depth 162m

* The exact locations of these stations are generally within one-half mile of those indicated above.

COMMENTS

Station H-26

Subsurface-Buoy Mooring

April 16 through May 15, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 102) 29-day period. No comment.
140m	Aanderaa Current Meter (Serial No. 101) 29-day period. No comment.

May 15 through June 18, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 102) 34-day period. No comment.
140m	Aanderaa Current Meter (Serial No. 101) 31-day period. Clock inoperative when meter retrieved. Sampling rate assumed to be same as during previous observations.

Note: Bathythermograph observation and hydrographic cast made at 1223 on May 23, 1969.

June 18 through July 10, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 102) 22-day period. No comment.
140m	Aanderaa Current Meter (Serial No. 101) 22-day period. No comment.

July 10 through July 24, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 102) 14-day period. No comment.
140m	Aanderaa Current Meter (Serial No. 101) 14-day period. Meter damaged extensively.

Note: Mooring snagged by tug boat with tow. Mooring dragged 4 miles to north. Inspection of data indicated accident occurred during 2040 through 2050 on July 24, 1969.

August 28 through September 18, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 102) 21-day period. Upon inspection of this meter at later date found "orientation stud" of meter reversed. This would give current directions that would be reversed. All directions re- corded during <u>August 28 through April 27, 1970,</u> have been corrected to read correct directions.
140m	Aanderaa Current Meter (Serial No. 101) 21-day period. No comment.

Note: Gap of one month present between start of this series of measurements and end of previous series.

COMMENTS (cont'd)

September 18 through October 16, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 102) 28-day period. See previous comment regarding this meter.
140m	Aanderaa Current Meter (Serial No. 101) 28-day period. No comment.

October 16 through November 25, 1969.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 102) 40-day period. See previous comment regarding this meter.
140m	Aanderaa Current Meter (Serial No. 101) 40-day period. No comment.

Note: Bathythermograph observation and hydrographic cast made at 0905 and 0910 respectively on November 25, 1969.

November 25, 1969 through January 9, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 102) 45-day period. See previous comment regarding this meter.
140m	Aanderaa Current Meter (Serial No. 101) 15-day period. Clock inoperative when meter retrieved. Sampling rate assumed to be same as during previous observations.

January 9 through February 19, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 101) 14-day period. Clock inoperative when meter retrieved. Sampling rate assumed to be same as during previous observations.
140m	Aanderaa Current Meter (Serial No. 102) 14-day period. See previous comment regarding this meter.

February 19 through March 25, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 97) 34-day period. No comment.
140m	Aanderaa Current Meter (Serial No. 102) 34-day period. See previous comment regarding this meter.

March 25 through April 27, 1970.

Instrument Depth: 50m	Aanderaa Current Meter (Serial No. 97) 33-day period. No comment.
140m	Aanderaa Current Meter (Serial No. 102) 33-day period. See previous comment regarding this meter.

COMMENTS (cont'd)

Taut-Rope Mooring

April 28 through June 19, 1970.

Instrument Depth: 3m	Geodyne*Current Meter (Serial No. M-187) 52-day period. This meter was lifted out of water for one minute inspection at 0910 on May 22, 1970.
50m	Aanderaa Current Meter (Serial No. 97) 52-day period. No comment.

June 19 through July 28, 1970.

Instrument Depth: 3m	Geodyne Current Meter (Serial No. M-187) 39-day period. No comment.
50m	Aanderaa Current Meter (Serial No. 98) 39-day period. No comment.

July 28 through

Instrument Depth: 3m	Geodyne Current Meter (Serial No. M-187) 9-day period. This meter was fouled by fishing net on August 5, 1970.
50m	Aanderaa Current Meter (Serial No. 99) Meter failed due to leaking cylinder case. No data available.

*It is to be noted that while the Aanderaa (Bergen) Current Meter used in the present program was made to sample every 10 minutes, the Geodyne Current Meter was set to "burst-sample" every 15 minutes (that is, every 15 minutes it recorded 15 samples at 5-second intervals).

ACKNOWLEDGEMENT

The acquisition of, and the processing of oceanographic data obtained from moored instruments require the assistance and cooperation of many individuals and groups. We acknowledge the assistance rendered by the staff of the Nanaimo Biological Station of the Fisheries Research Board of Canada, of the Pacific Oceanographic Group of the Marine Sciences Branch (now at the Pacific Environment Institute at West Vancouver, B.C.), of the Tidal and Current Survey of the Marine Sciences Branch and the officers and men of the research vessels, C.G.S. *Parizeau* (M.S.B.), C.G.S. *Vector* (M.S.B.) and C.G.S. *A.P. Knight* (F.R.B.C.). Individuals associated with the above were duly acknowledged in our first report. Since the publication of the first report in 1971, a number of people have assisted in the computer-processing of data and in the preparation of illustrations. We appreciate the generous assistance given by Mr. J.A.C. Thomson and Mrs. A. Sandnes of the Computing Centre at the Nanaimo Biological Station, Messrs. B. de Lange Boom and I. Daniel who processed the data, Miss T.A. Findlay who prepared the illustrations, and Mr. C. Morley of the Nanaimo Biological Station and Mr. R. Banyard of the Canadian Hydrographic Service of the Marine Sciences Branch who photo-reproduced all the illustrations. We owe our thanks to Miss M. Dyer for organizing and making the preparatory work essential to the publication of this report.

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1958. Drift bottle observations in the Strait of Georgia. J. Fish. Res. Bd. Canada 15: 1065-1102.

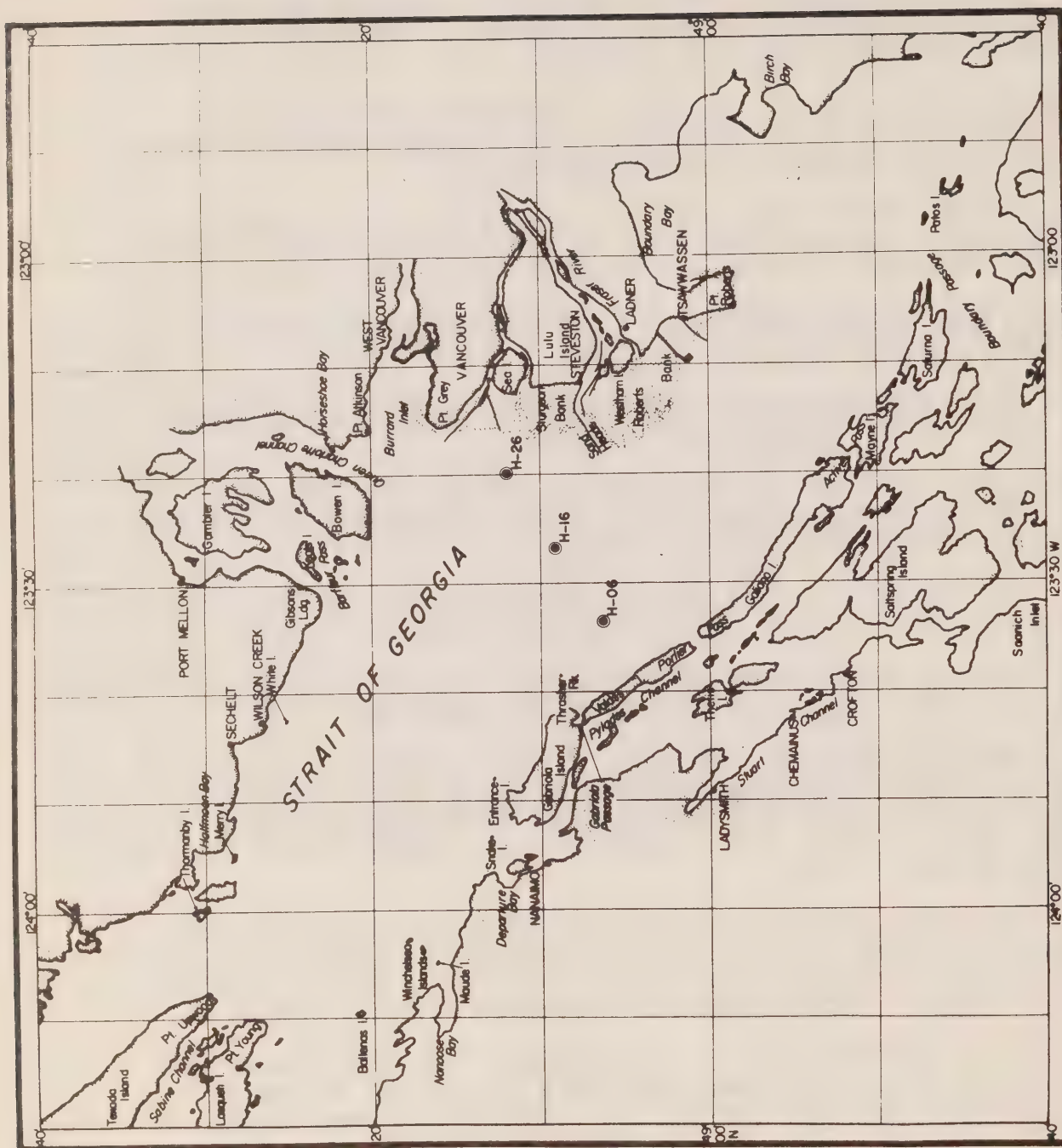


Fig. 1. Location of stations in the central Strait of Georgia where observations were made. The records described in this report were obtained at Station H-26.

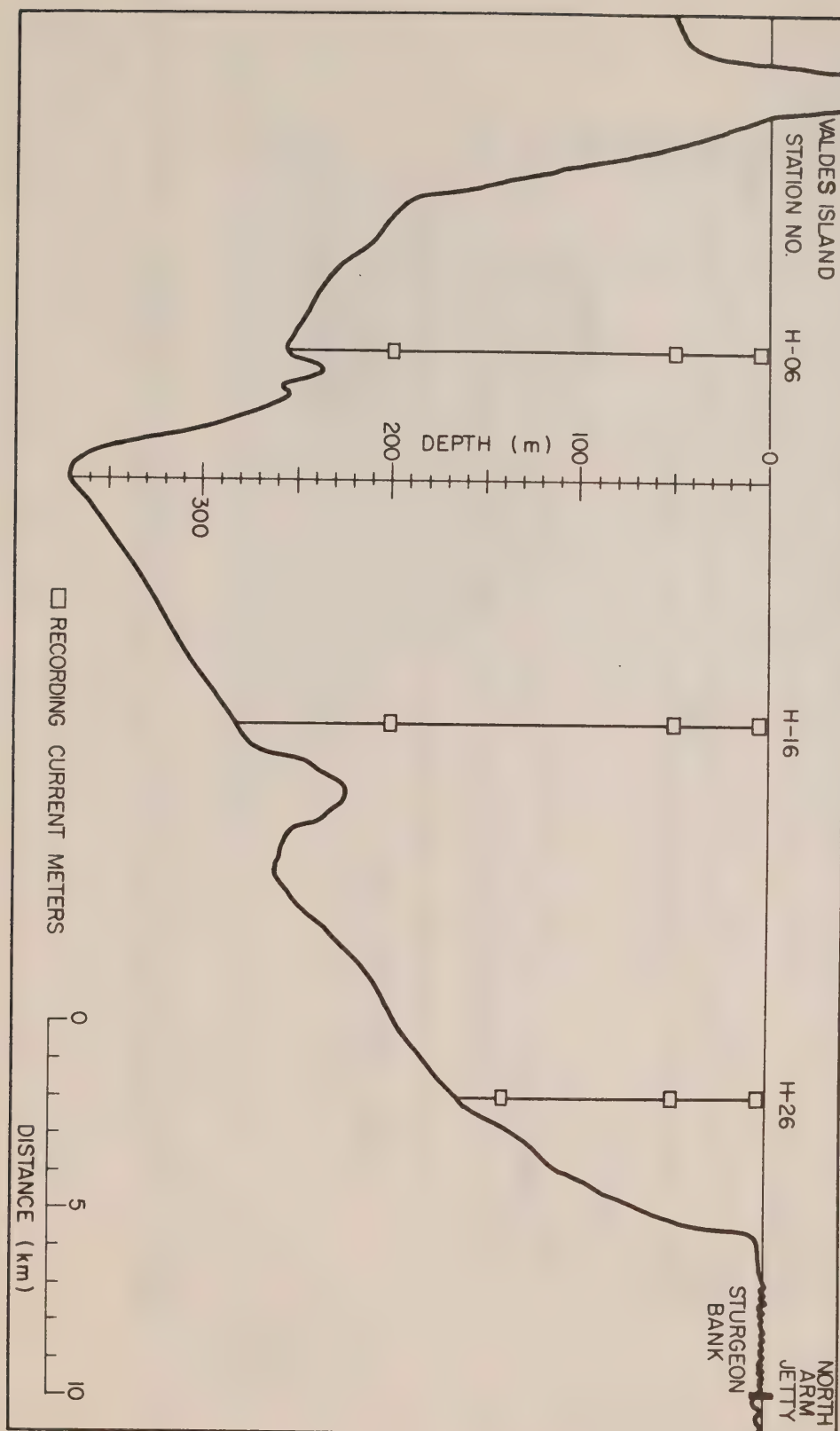


Fig. 2. Cross-section along the line of stations H-06, H-16 and H-26, between Valdes Island and Point Grey. The records described in this report were obtained at Station H-26.

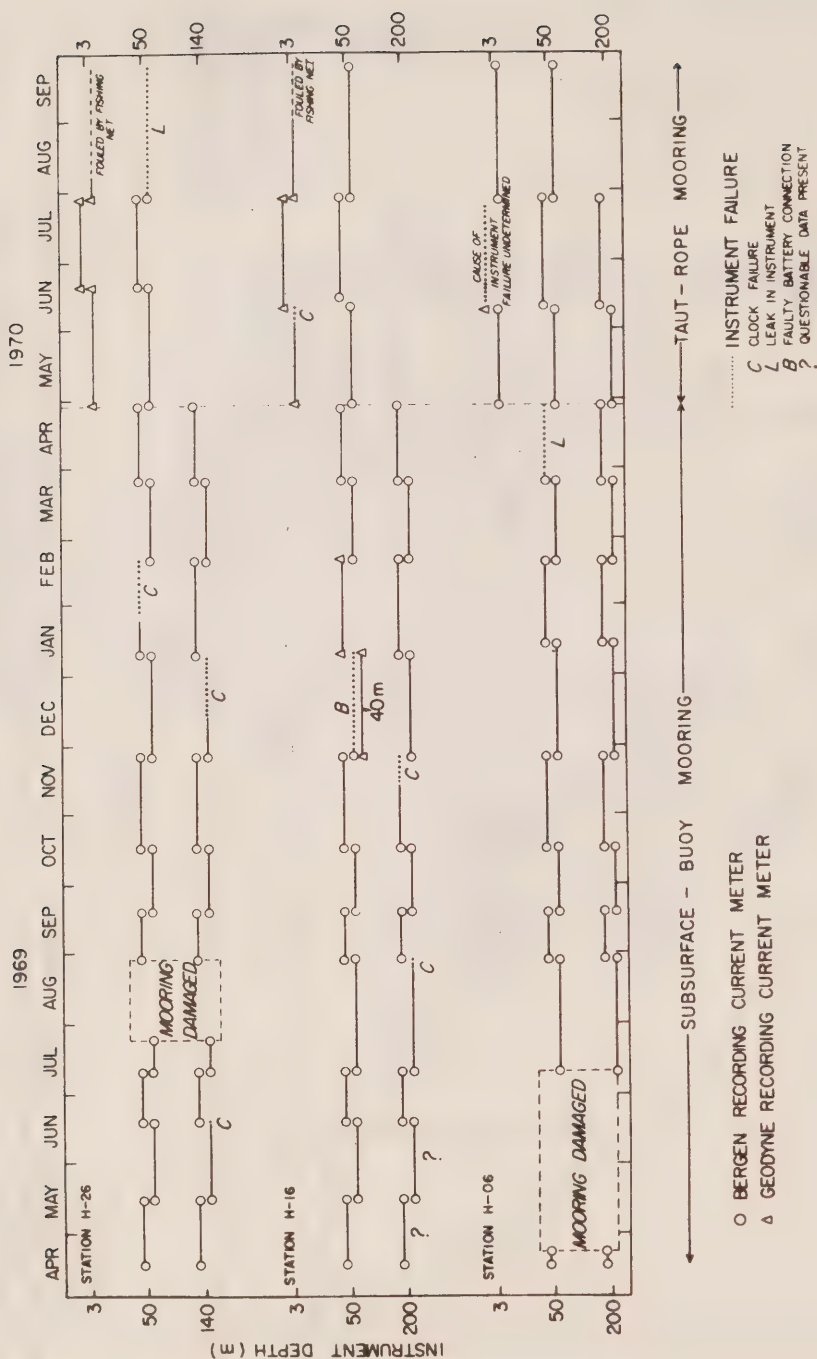


Fig. 3. Schematic drawing showing summary of events that occurred during the program of observations during 1969-1970. The records described in this report were obtained at Station H-26.

FIG. 4A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 52-DAY PERIOD DURING APRIL 28 THROUGH JUNE 19, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

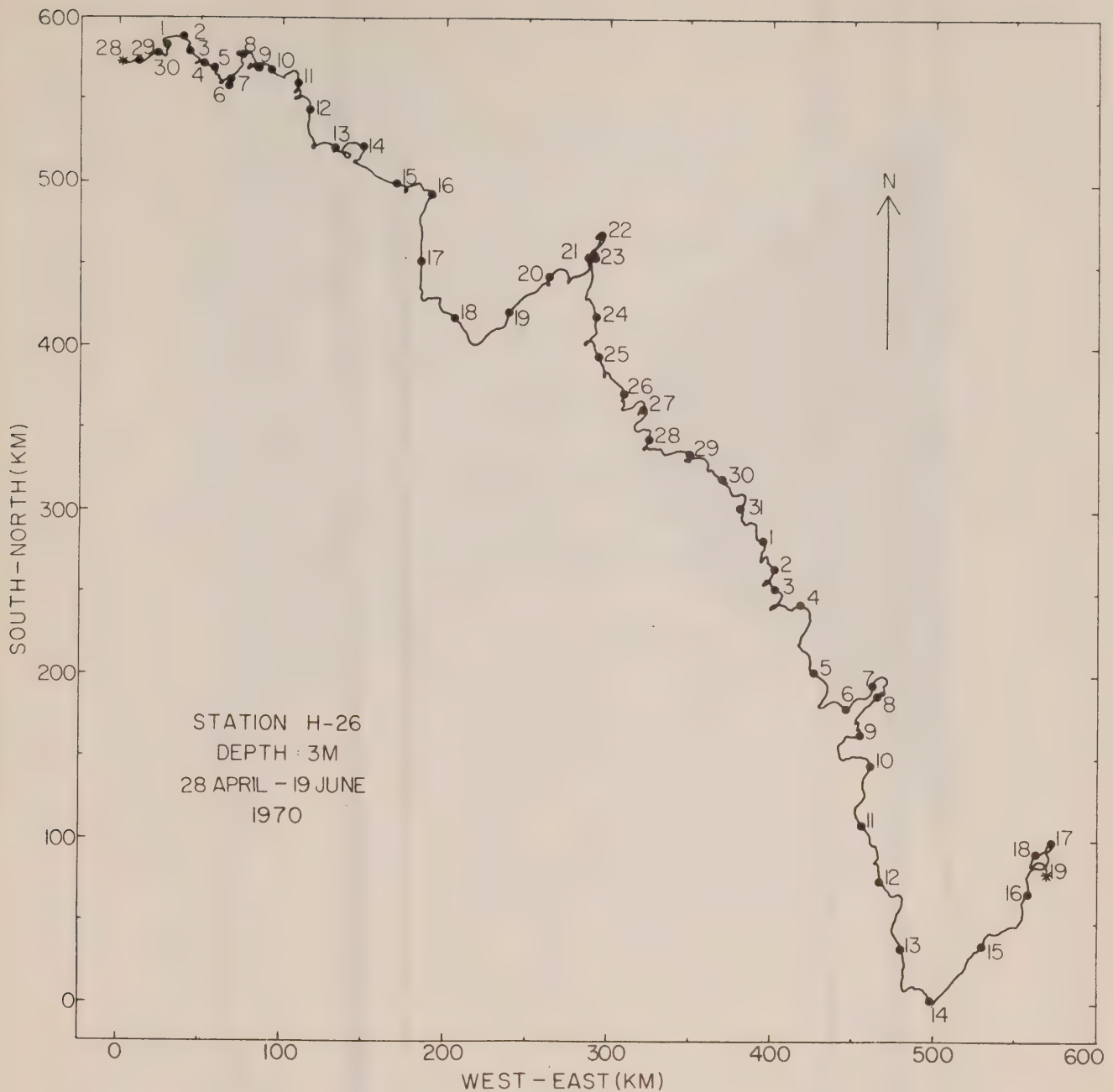


Fig. 4c. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 52-day period during April 28 through June 19, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

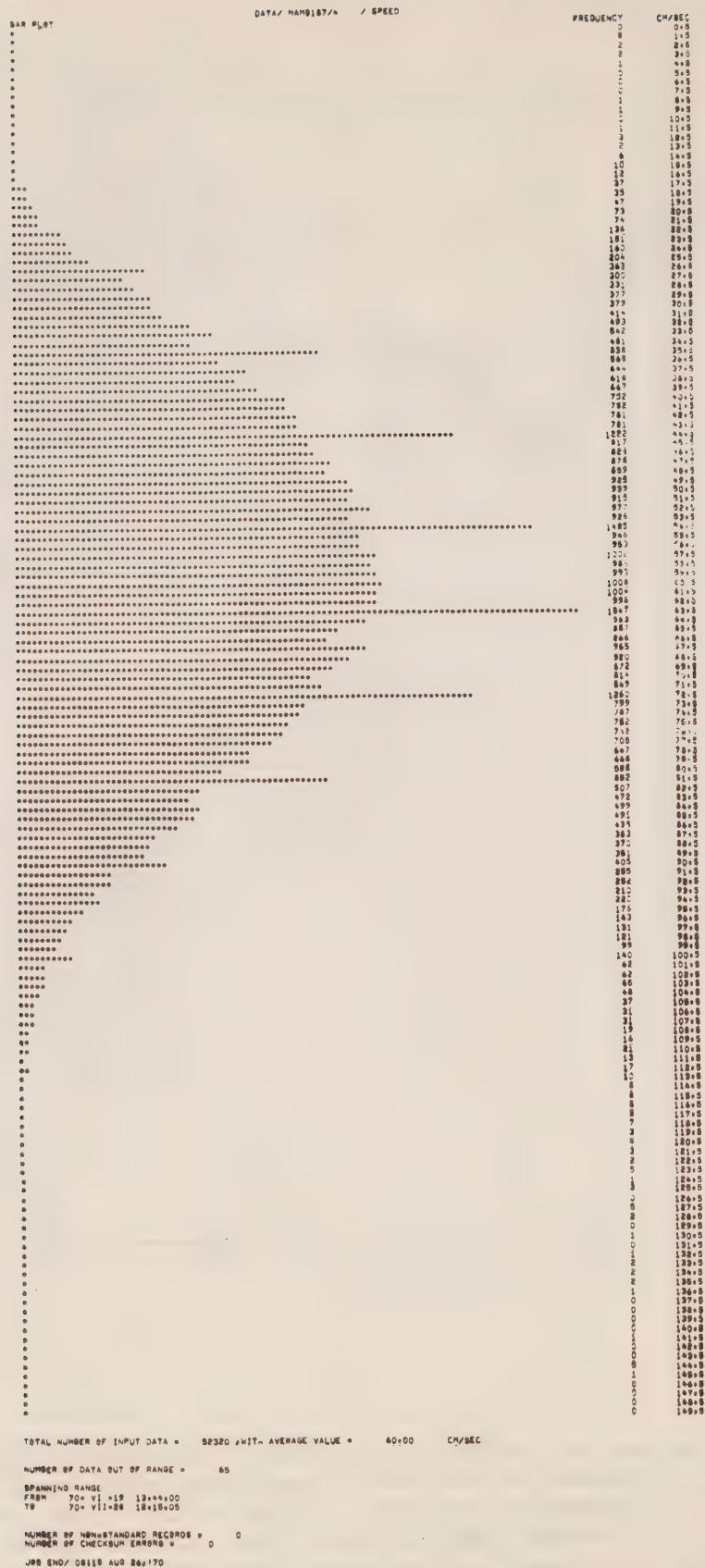


FIG. 5A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 39-DAY PERIOD DURING JUNE 19 THROUGH JULY 28, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

BAR PLST	DATA/ NAME187/4 / DIRECTION	FREQUENCY	DEGREES
*****		509	1
*****		540	3
*****		568	6
*****		1315	8
*****		803	11
*****		711	14
*****		811	17
*****		954	22
*****		847	23
*****		799	25
*****		1264	28
*****		909	31
*****		777	34
*****		921	37
*****		968	39
*****		860	42
*****		781	45
*****		813	48
*****		1633	51
*****		708	53
*****		733	56
*****		793	59
*****		647	62
*****		628	65
*****		762	68
*****		648	70
*****		570	73
*****		689	76
*****		554	79
*****		584	82
*****		968	84
*****		675	87
*****		675	90
*****		484	93
*****		409	96
*****		393	98
*****		444	101
*****		380	104
*****		345	107
*****		386	110
*****		367	113
*****		340	116
*****		260	118
*****		262	121
*****		399	124
*****		127	127
*****		328	129
*****		322	132
*****		360	136
*****		418	138
*****		394	141
*****		381	143
*****		378	146
*****		466	149
*****		387	152
*****		269	155
*****		424	158
*****		423	161
*****		467	163
*****		146	166
*****		461	169
*****		479	172
*****		474	174
*****		492	177
*****		477	180
*****		494	183
*****		512	186
*****		514	188
*****		462	191
*****		194	194
*****		465	197
*****		510	200
*****		483	203
*****		365	205
*****		448	208
*****		241	211
*****		284	214
*****		251	217
*****		1	219
*****		301	222
*****		289	225
*****		266	228
*****		194	231
*****		284	232
*****		220	234
*****		170	239
*****		177	242
*****		174	245
*****		173	248
*****		1	250
*****		132	253
*****		127	256
*****		149	259
*****		103	262
*****		114	264
*****		81	267
*****		107	270
*****		120	273
*****		84	276
*****		88	278
*****		82	281
*****		99	284
*****		86	287
*****		75	290
*****		92	293
*****		99	296
*****		102	298
*****		87	301
*****		100	304
*****		83	307
*****		80	309
*****		88	312
*****		100	315
*****		145	318
*****		183	321
*****		119	323
*****		148	326
*****		142	329
*****		194	332
*****		198	335
*****		214	338
*****		313	340
*****		311	343
*****		320	346
*****		374	349
*****		428	352
*****		413	354
*****		433	357

TOTAL NUMBER OF INPUT DATA = 52320 WITH AVERAGE VALUE = 121.47 DEGREES

NUMBER OF DATA OUT OF RANGE = 0

SPANNING RANGE
FROM 70° VI-19 13:44:00
TO 70° VII-28 12:15:05

FIG. 5b. A HISTOGRAM OF DIRECTION ("TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 59 DAY PERIOD DURING JUNE 19 THROUGH JULY 28, 1970.

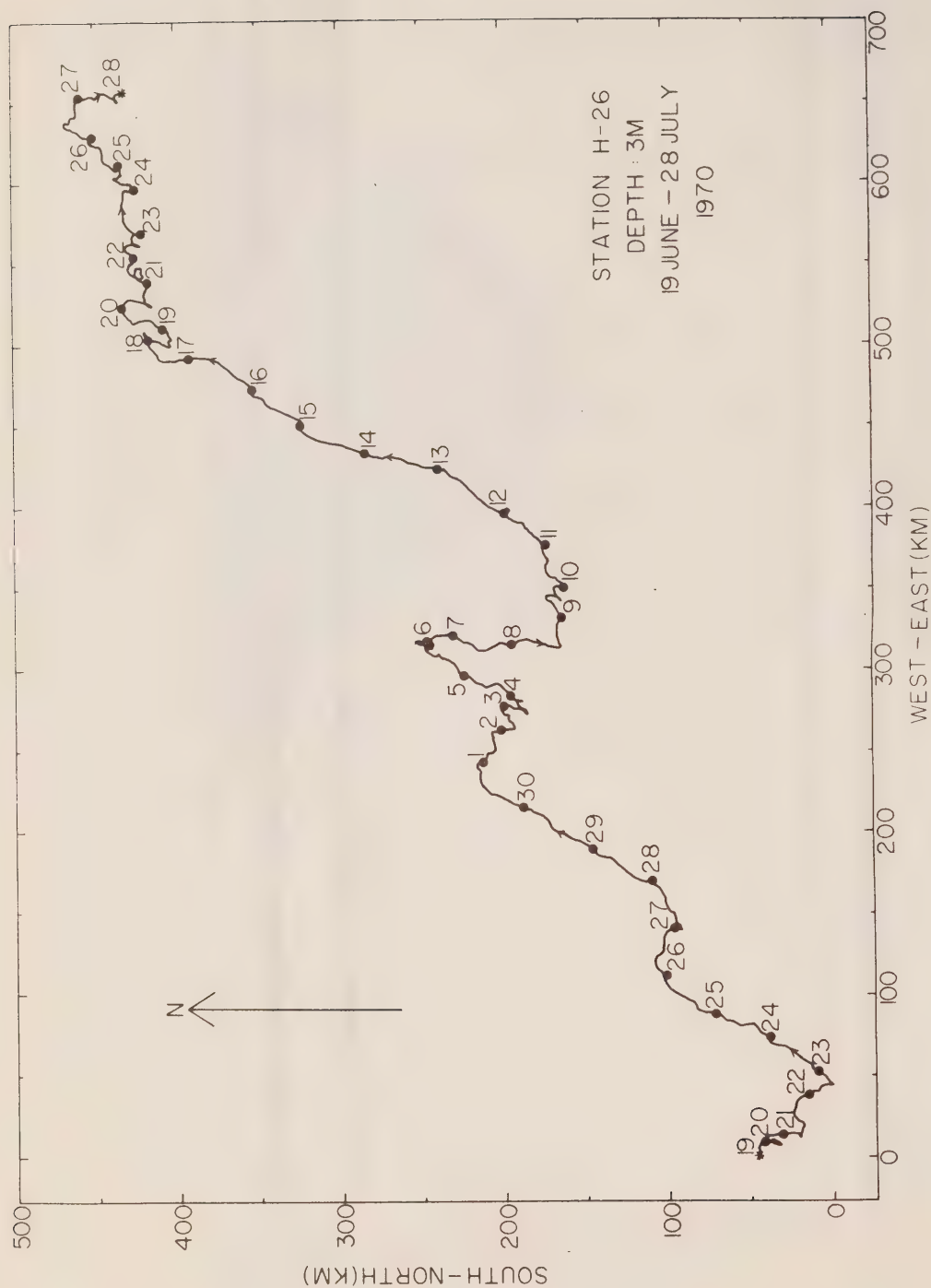
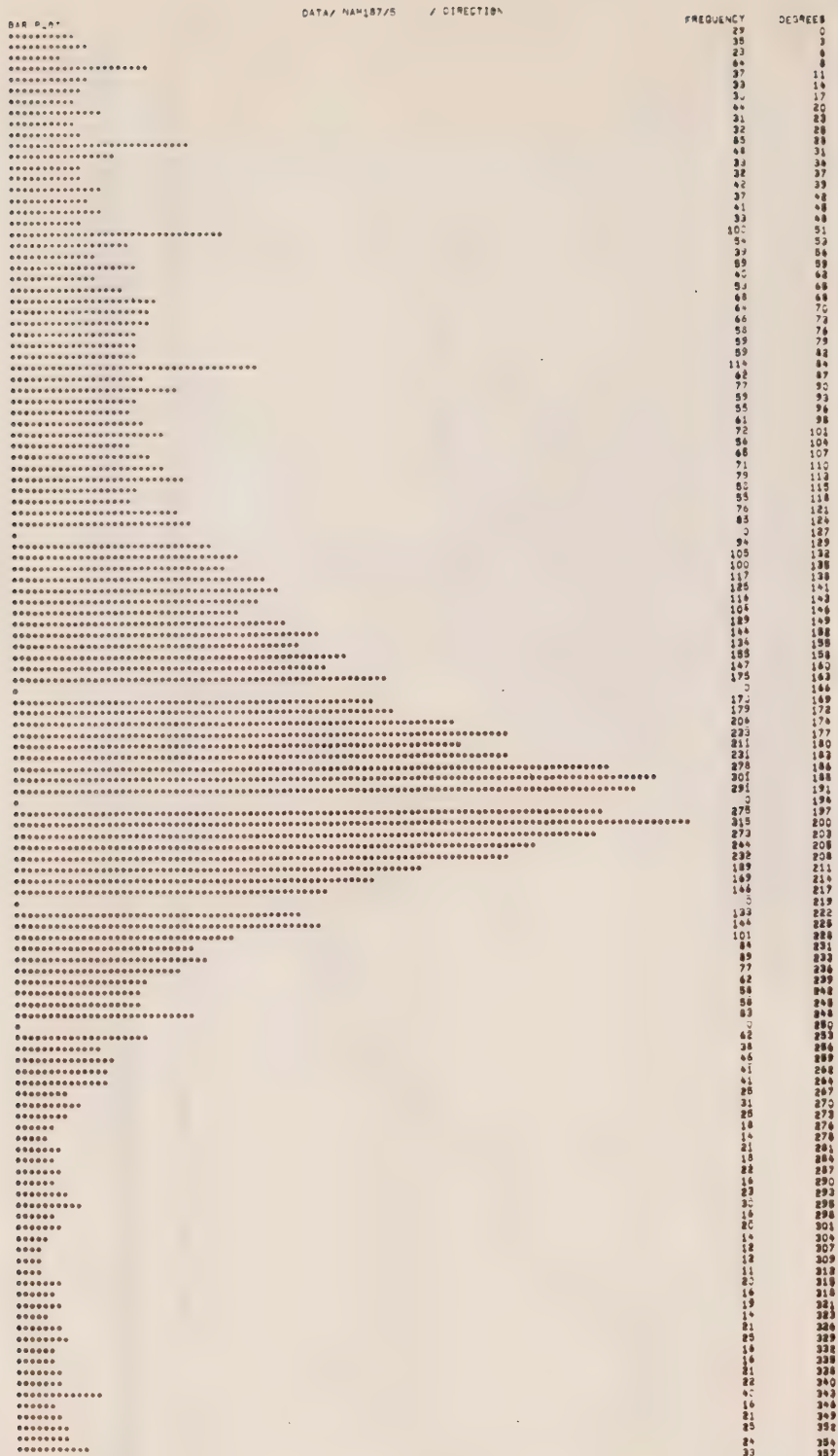


Fig. 5c. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 39-day period during June 19 through July 28, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.



TOTAL NUMBER OF INPUT DATA = 9855 WITH AVERAGE VALUE = 167.77 DEGREES

NUMBER OF DATA OUT OF RANGE = 0

SPANNING RANGE
FROM 7:00-11:28 14:30-20
TO 7:00-11:04 23:00-05

FIG. 6b. A HISTOGRAM OF DIRECTION (TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 9-DAY PERIOD DURING JULY 28 THROUGH AUGUST 5, 1970.

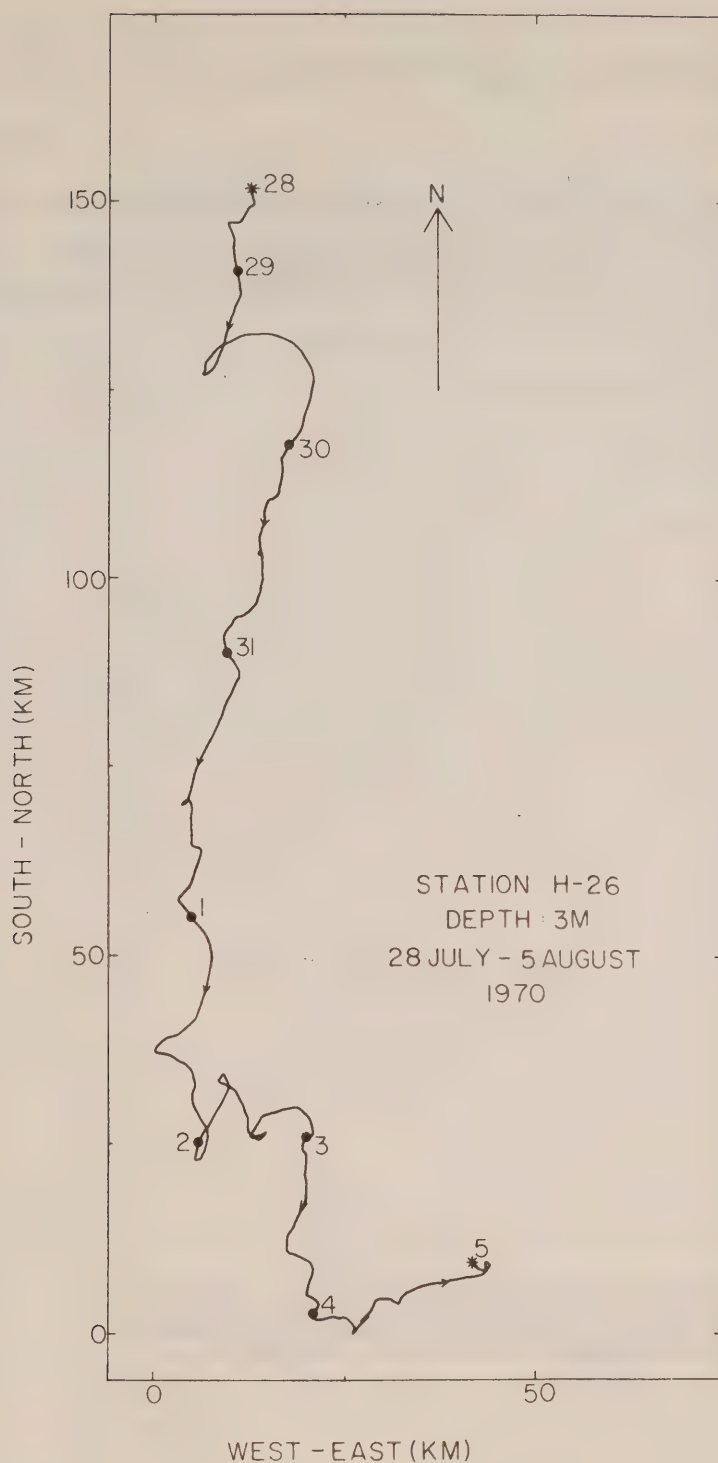


Fig. 6c. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 9-day period during July 28 through August 5, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11.25/16/ 4/69 TO 11.15/15/ 5/69

MEAN SPEED	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
0	0	0	0									
10	414	10	0	0	0	0	0	0	0	0	0	0
20	148	4	0	0	0	0	0	0	0	0	0	0
30	240	6	0	0	0	0	0	0	0	0	0	0
40	457	11	0	0	0	0	0	0	0	0	0	0
50	327	8	0	0	0	0	0	0	0	0	0	0
60	436	10	0	0	0	0	0	0	0	0	0	0
70	213	5	0	0	0	0	0	0	0	0	0	0
80	274	7	0	0	0	0	0	0	0	0	0	0
90	154	4	0	0	0	0	0	0	0	0	0	0
100	107	3	0	0	0	0	0	0	0	0	0	0
110	186	4	0	0	0	0	0	0	0	0	0	0
120	116	3	0	0	0	0	0	0	0	0	0	0
130	136	3	0	0	0	0	0	0	0	0	0	0
140	83	2	0	0	0	0	0	0	0	0	0	0
150	124	3	0	0	0	0	0	0	0	0	0	0
160	71	2	0	0	0	0	0	0	0	0	0	0
170	82	2	0	0	0	0	0	0	0	0	0	0
180	111	3	0	0	0	0	0	0	0	0	0	0
190	65	2	0	0	0	0	0	0	0	0	0	0
200	97	2	0	0	0	0	0	0	0	0	0	0
210	49	1	0	0	0	0	0	0	0	0	0	0
220	81	2	0	0	0	0	0	0	0	0	0	0
230	48	1	0	0	0	0	0	0	0	0	0	0
240	31	1	0	0	0	0	0	0	0	0	0	0
250	39	1	0	0	0	0	0	0	0	0	0	0
260	23	1	0	0	0	0	0	0	0	0	0	0
270	28	1	0	0	0	0	0	0	0	0	0	0
280	11	0	0	0	0	0	0	0	0	0	0	0
290	10	0	0	0	0	0	0	0	0	0	0	0
300	5	0	0	0	0	0	0	0	0	0	0	0
310	6	0	0	0	0	0	0	0	0	0	0	0
320	5	0	0	0	0	0	0	0	0	0	0	0
330	0	0	0	0	0	0	0	0	0	0	0	0
340	0	0	0	0	0	0	0	0	0	0	0	0
350	0	0	0	0	0	0	0	0	0	0	0	0
360	0	0	0	0	0	0	0	0	0	0	0	0
370	1	0	0	0	0	0	0	0	0	0	0	0
380	0	0	0	0	0	0	0	0	0	0	0	0
390	0	0	0	0	0	0	0	0	0	0	0	0
400	1	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 400 = 0

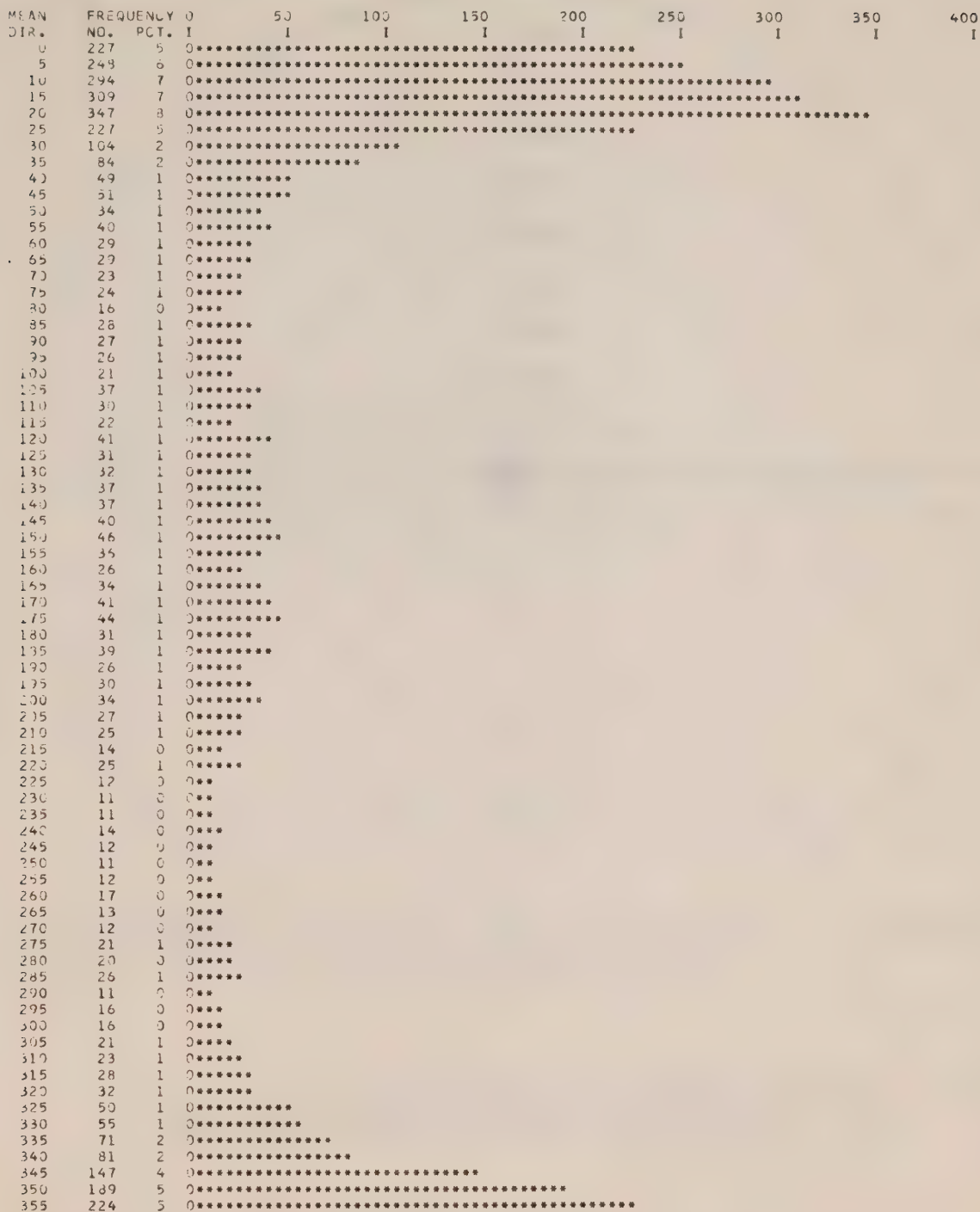
NUMBER OF OBSERVATIONS = 4178

MEAN SPEED = 90 MM/SEC

FIG. 7A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11.25/16/ 4/69 TO 11.15/15/ 5/69



NUMBER OF OBSERVATIONS = 4178

FIG. 7B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

STATION NO. H-26 LAT. 48-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 11.25/16/ 4/69 TO 11.15/15/ 5/69

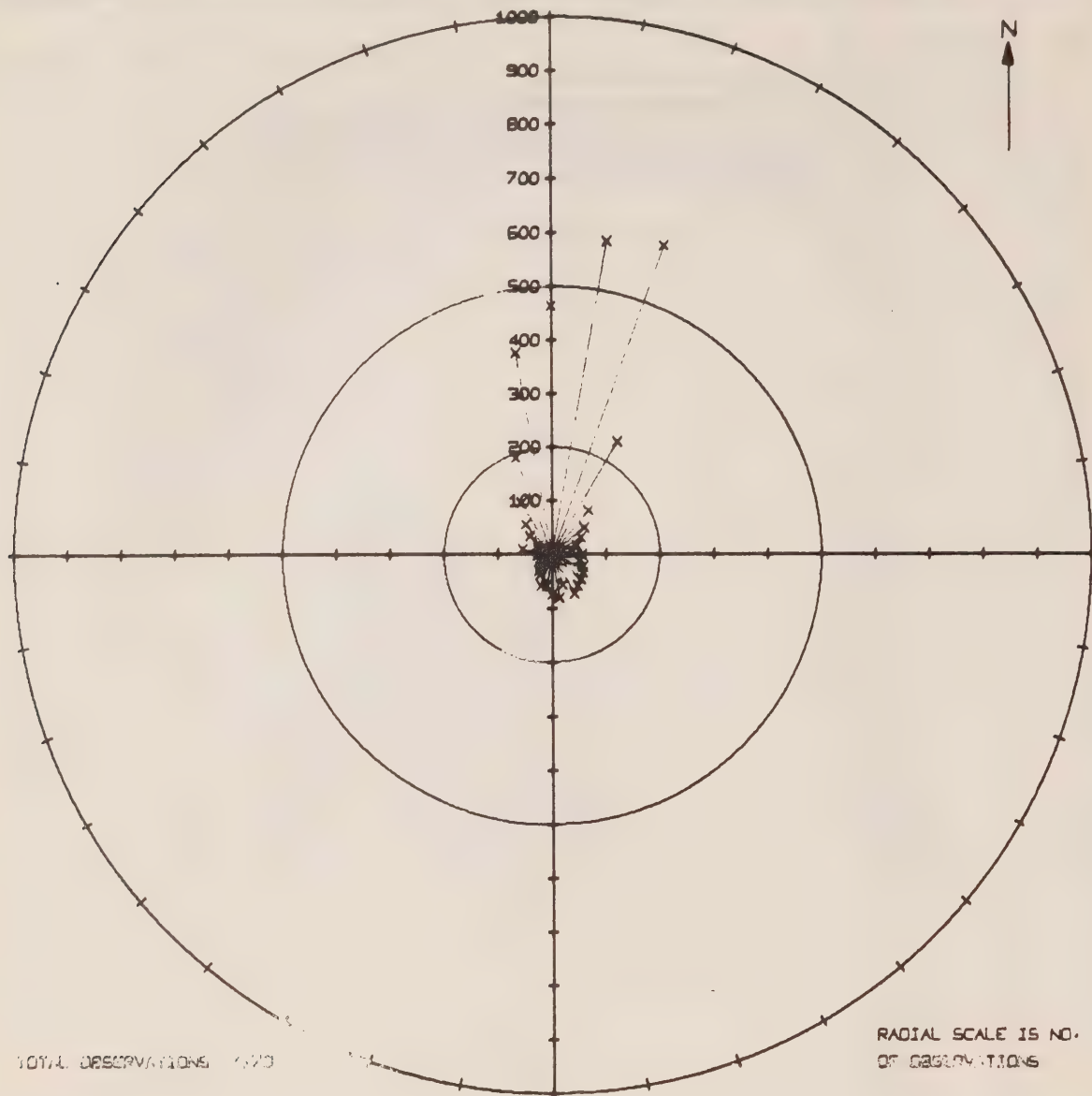


FIG. 7c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

STATION NO. H-26 LAT. 49-11.85 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 11.25/16/ 4/69 TO 11.15/15/ 5/69

MEAN TEMP.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I	I
6.00	0	0	0										
6.05	0	0	0										
6.10	0	0	0										
6.15	0	0	0										
6.20	0	0	0										
6.25	0	0	0										
6.30	0	0	0										
6.35	0	0	0										
6.40	0	0	0										
6.45	0	0	0										
6.50	0	0	0										
6.55	0	0	0										
6.60	0	0	0										
6.65	0	0	0										
6.70	0	0	0										
6.75	1	0	0										
6.80	0	0	0										
6.85	1	0	0										
6.90	2	0	0										
6.95	59	1	0	*****									
7.00	112	3	0	*****									
7.05	131	3	0	*****									
7.10	272	7	0	*****									
7.15	370	9	0	*****									
7.20	236	6	0	*****									
7.25	416	10	0	*****									
7.30	285	7	0	*****									
7.35	431	10	0	*****									
7.40	463	11	0	*****									
7.45	312	7	0	*****									
7.50	209	6	0	*****									
7.55	184	4	0	*****									
7.60	22	1	0	****									
7.65	81	2	0	*****									
7.70	73	2	0	*****									
7.75	73	2	0	*****									
7.80	57	1	0	*****									
7.85	52	1	0	*****									
7.90	24	1	0	****									
7.95	56	1	0	*****									
8.00	52	1	0	*****									
8.05	63	2	0	*****									
8.10	32	1	0	*****									
8.15	32	1	0	*****									
8.20	17	0	0	***									

NUMBER OF TEMP. GREATER THAN 8.20 = 0

NUMBER OF OBSERVATIONS = 4178

MEAN TEMP = 7.38 DEG. C.

FIG. 7D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

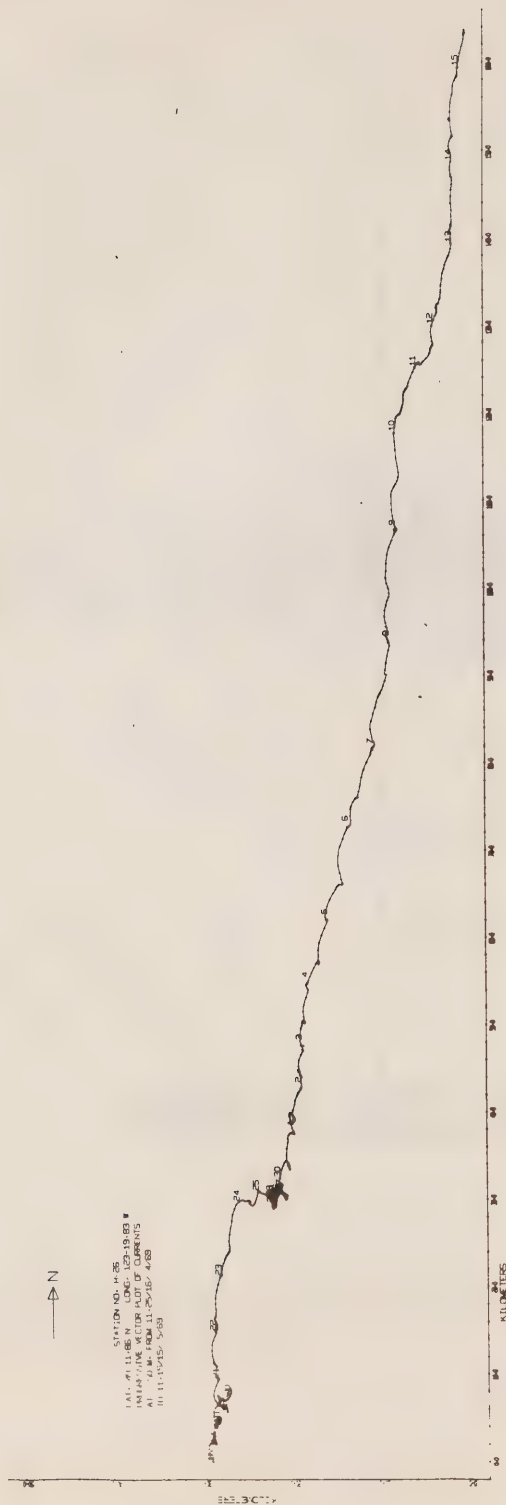


Fig. 7e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 29-day period during April 16 through May 15, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.44 N LONG. 123-17.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 13.45/15/ 6/69 TO 11.35/18/ 6/69

SPEED	FREQUENCY	100	200	300	400	500	600	700	800	900	1000
NO.	PCT.	I	I	I	I	I	I	I	I	I	I
0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
20	92	2	0	0	0	0	0	0	0	0	0
30	157	3	0	0	0	0	0	0	0	0	0
40	470	9	0	0	0	0	0	0	0	0	0
50	344	7	0	0	0	0	0	0	0	0	0
60	522	11	0	0	0	0	0	0	0	0	0
70	244	5	0	0	0	0	0	0	0	0	0
80	371	8	0	0	0	0	0	0	0	0	0
90	233	5	0	0	0	0	0	0	0	0	0
100	239	5	0	0	0	0	0	0	0	0	0
110	305	6	0	0	0	0	0	0	0	0	0
120	0	4	0	0	0	0	0	0	0	0	0
130	271	5	0	0	0	0	0	0	0	0	0
140	171	4	0	0	0	0	0	0	0	0	0
150	125	3	0	0	0	0	0	0	0	0	0
160	110	2	0	0	0	0	0	0	0	0	0
170	86	2	0	0	0	0	0	0	0	0	0
180	143	3	0	0	0	0	0	0	0	0	0
190	74	2	0	0	0	0	0	0	0	0	0
200	119	2	0	0	0	0	0	0	0	0	0
210	59	1	0	0	0	0	0	0	0	0	0
220	63	1	0	0	0	0	0	0	0	0	0
230	30	1	0	0	0	0	0	0	0	0	0
240	26	1	0	0	0	0	0	0	0	0	0
250	30	1	0	0	0	0	0	0	0	0	0
260	8	0	0	0	0	0	0	0	0	0	0
270	14	0	0	0	0	0	0	0	0	0	0
280	3	0	0	0	0	0	0	0	0	0	0
290	3	0	0	0	0	0	0	0	0	0	0
300	4	0	0	0	0	0	0	0	0	0	0
310	1	0	0	0	0	0	0	0	0	0	0

NO. OF SPEEDS GREATER THAN 310 =

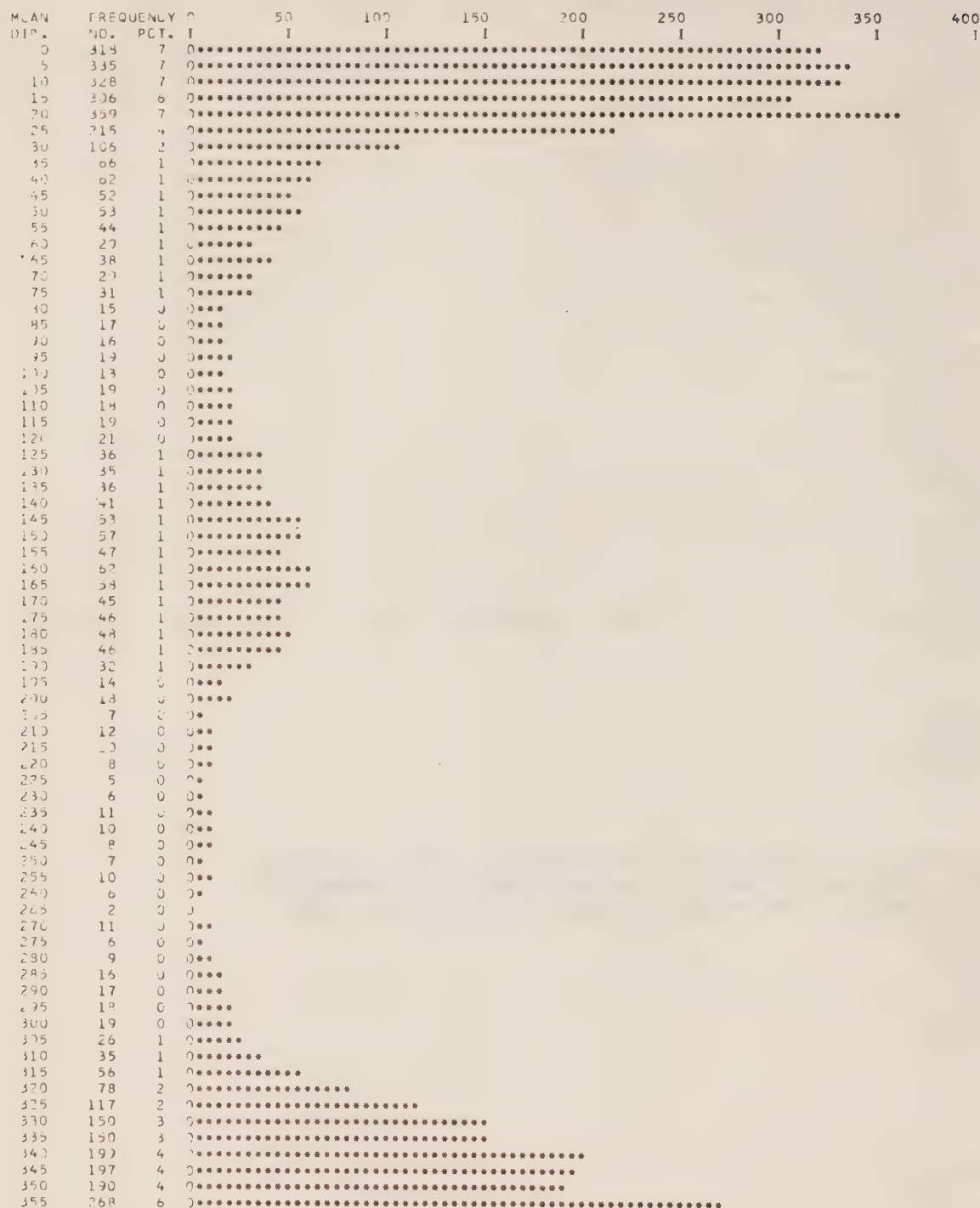
NUMBER OF OBSERVATIONS = 4866

MEAN SPEED = 98 MM/SEC

FIG. 8A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.36 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 13.45/15/ 5/69 TO 11.35/18/ 6/69



NUMBER OF OBSERVATIONS = 4866

FIG. 8B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 13.45/15/ 5/69 TO 11.35/18/ 6/69

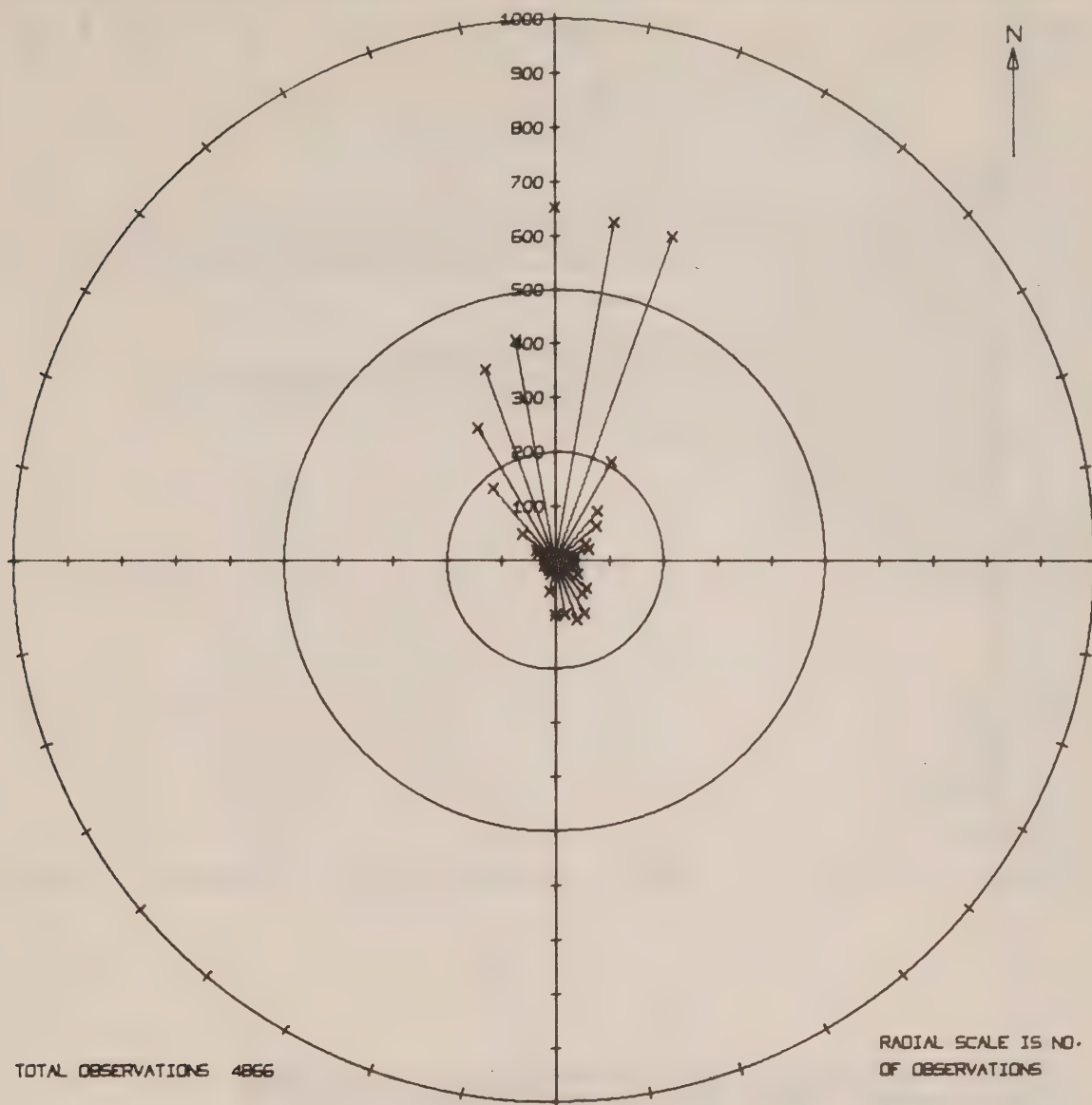
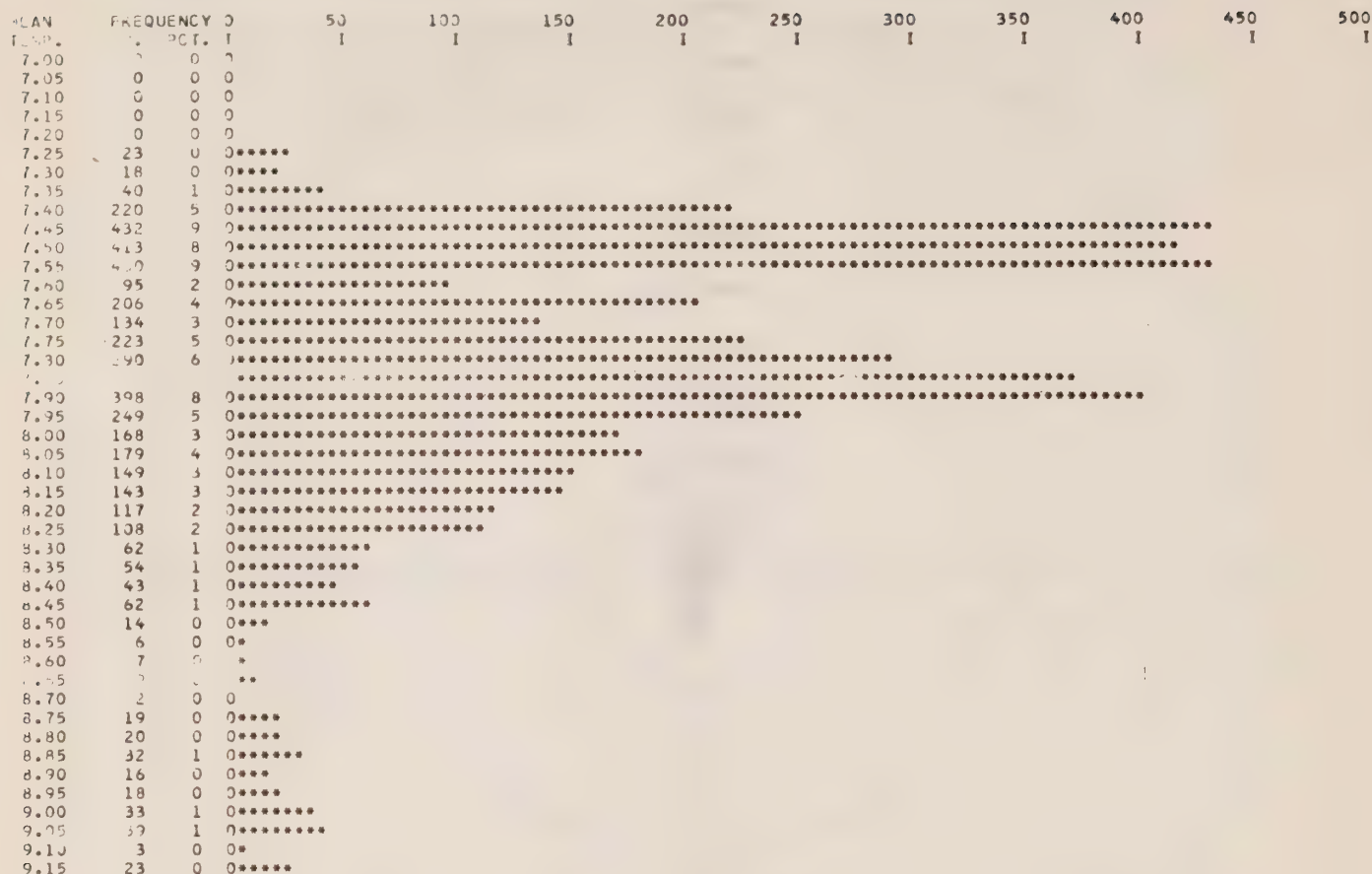


FIG. 8c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 13.45/15/ 5/69 TO 11.35/18/ 6/69



NUMBER OF TEMP. GREATER THAN 9.15 = 0

NUMBER OF OBSERVATIONS = 4866

MEAN TEMP = 7.83 DEG. C.

FIG. 8d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING MAY 15 THROUGH JUNE 18, 1969.

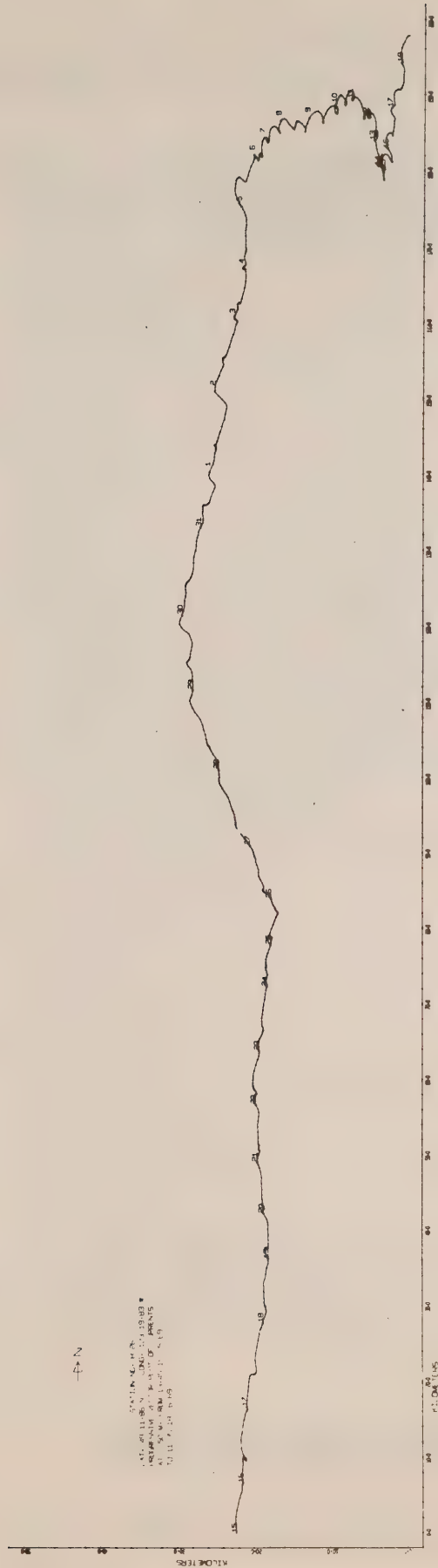


Fig. 8e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 34-day period during May 15 through June 18, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14.15/18/ 6/69 TO 13.39/10/ 7/69



NUMBER OF SPEEDS GREATER THAN 840 = 0

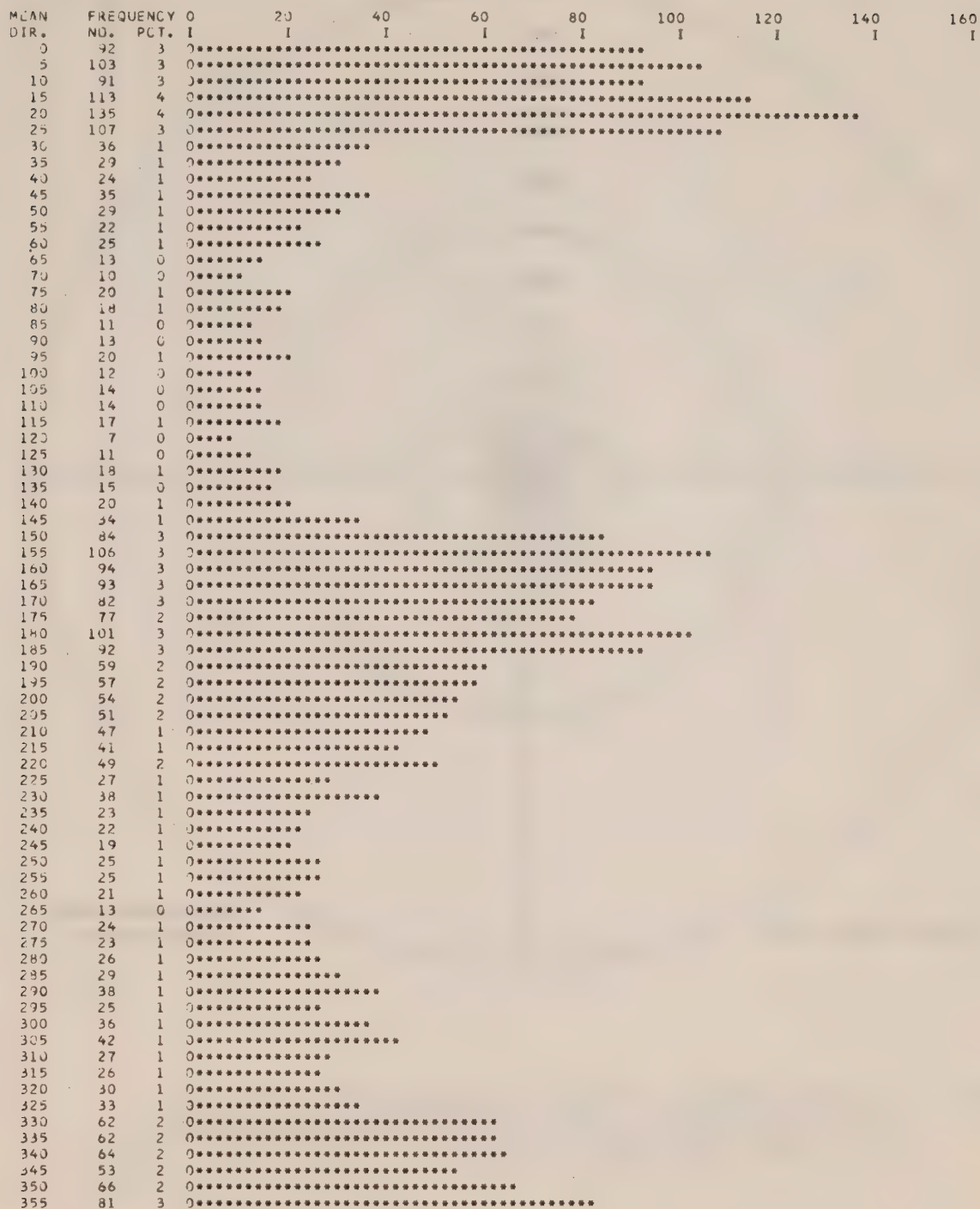
NUMBER OF OBSERVATIONS = 3155

MEAN SPEED = 75 MM/SEC

FIG. 9A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14.15/18/ 6/69 TO 13.39/10/ 7/69



NUMBER OF OBSERVATIONS = 3155

FIG. 9B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 10°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 14.15/18/ 6/69 TO 13.39/10/ 7/69

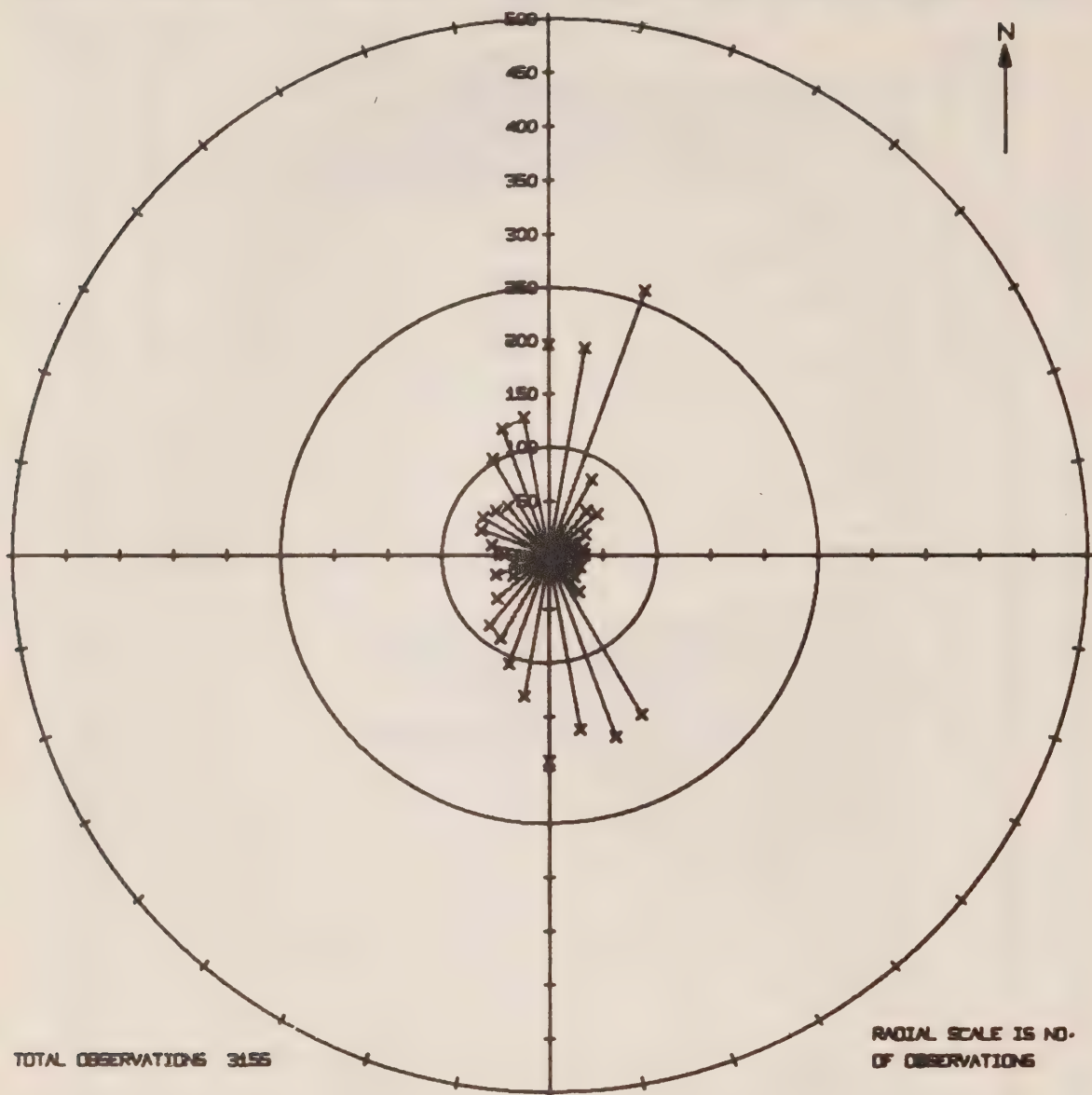


FIG. 9c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

STATION NO. H-26 LAT. 49-11.4' N LONG. 123-19.83 W
HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 14.15/13/ 6/69 TO 13.39/10/ 7/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	30	100	150	200	250	300	350	400	450	500
7.00	0	0	I	I	I	I	I	I	I	I	I	I
7.05	0	0										
7.10	0	0										
7.15	0	0										
7.20	0	0										
7.25	0	0										
7.30	0	0										
7.35	0	0										
7.40	0	0										
7.45	0	0										
7.50	0	0										
7.55	0	0										
7.60	0	0										
7.65	0	0										
7.70	0	0										
7.75	0	0										
7.80	0	0										
7.85	0	0										
7.90	0	0										
7.95	1	0										
8.00	14	0										
8.05	10	0										
8.10	34	1										
8.15	32	1										
8.20	31	1										
8.25	58	2										
8.30	74	2										
8.35	64	3										
8.40	90	3										
8.45	74	2										
8.50	57	2										
8.55	13	0										
8.60	47	2										
8.65	45	1										
8.70	50	2										
8.75	77	2										
8.80	129	4										
8.85	132	4										
8.90	53	2										
8.95	72	2										
9.00	67	2										
9.05	69	2										
9.10	109	6										
9.15	261	9										
9.20	73	3										
9.25	98	4										
9.30	21	1										
9.35	18	1										
9.40	42	1										
9.45	97	3										
9.50	135	4										
9.55	130	4										
9.60	175	6										
9.65	167	5										
9.70	200	5										
9.75	91	3										
9.80	105	3										
9.85	6	0										
9.90	10	0										
9.95	0	0										
10.00	0	0										
10.05	0	0										
10.10	0	0										
10.15	0	0										
10.20	0	0										
10.25	0	0										
10.30	1	0										
10.35	1	0										
10.40	4	0										
10.45	0	0										
10.50	0	0										
10.55	0	0										
10.60	0	0										
10.65	1	0										
10.70	1	0										

NUMBER OF TEMP. GREATER THAN 10.7) = 0

NUMBER OF OBSERVATIONS = 3155

MEAN TEMP = 9.11 DEG. C.

FIG. 9b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

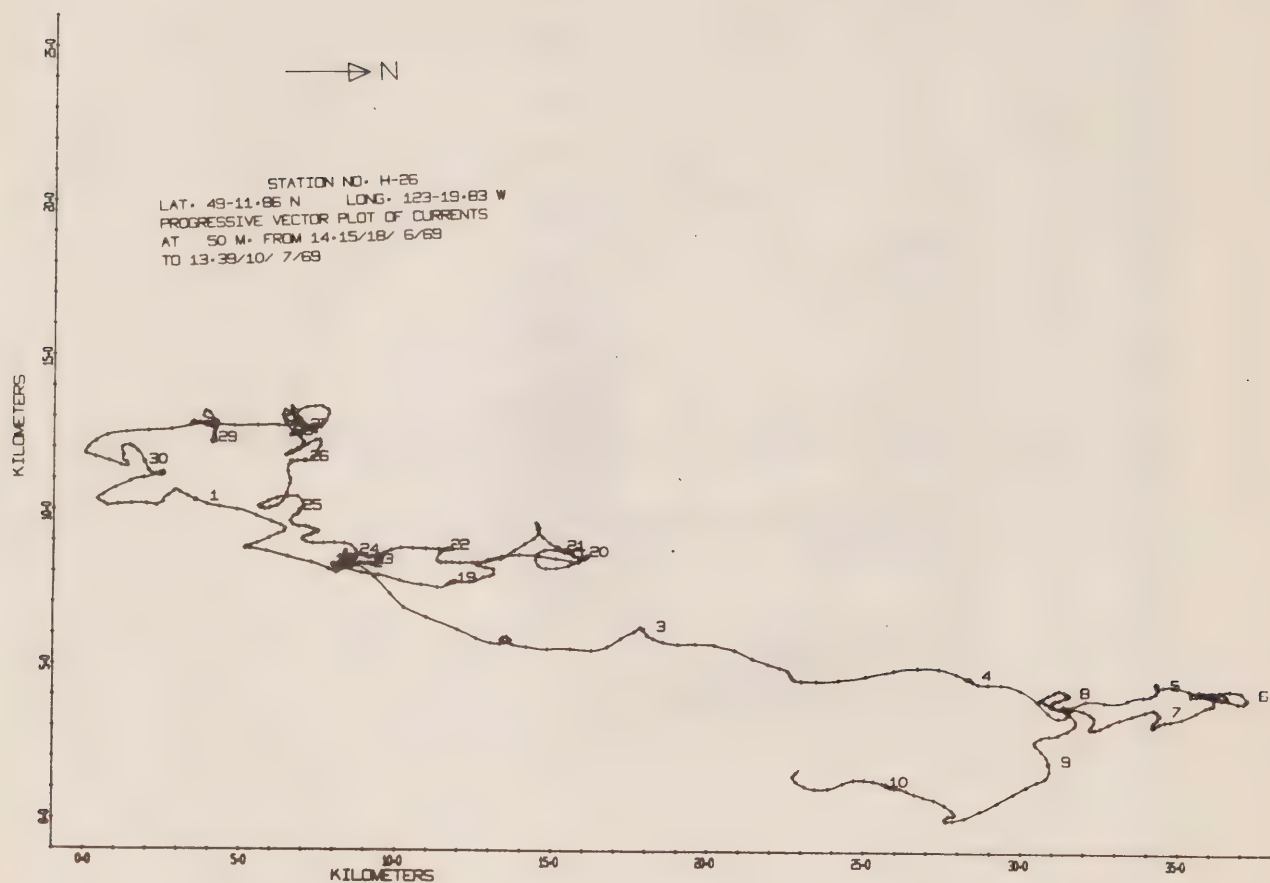


Fig. 9e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 22-day period during June 18 through July 10, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 15.39/10/ 7/69 TO 20.32/24/ 7/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	111	5	0	*****									
20	74	4	0	*****									
30	107	5	0	*****									
40	249	12	0	*****									
50	144	7	0	*****									
60	231	11	0	*****									
70	113	6	0	*****									
80	157	8	0	*****									
90	100	5	0	*****									
100	90	4	0	*****									
110	140	7	0	*****									
120	83	4	0	*****									
130	96	5	0	*****									
140	49	2	0	*****									
150	77	4	0	*****									
160	51	2	0	*****									
170	19	1	0	****									
180	25	1	0	****									
190	17	1	0	***									
200	26	1	0	****									
210	11	1	0	**									
220	23	1	0	****									
230	20	1	0	****									
240	12	1	0	**									
250	9	0	0	**									
260	7	0	0	*									
270	8	0	0	**									
280	1	0	0										
290	2	0	0										

NUMBER OF SPEEDS GREATER THAN 290 = 0

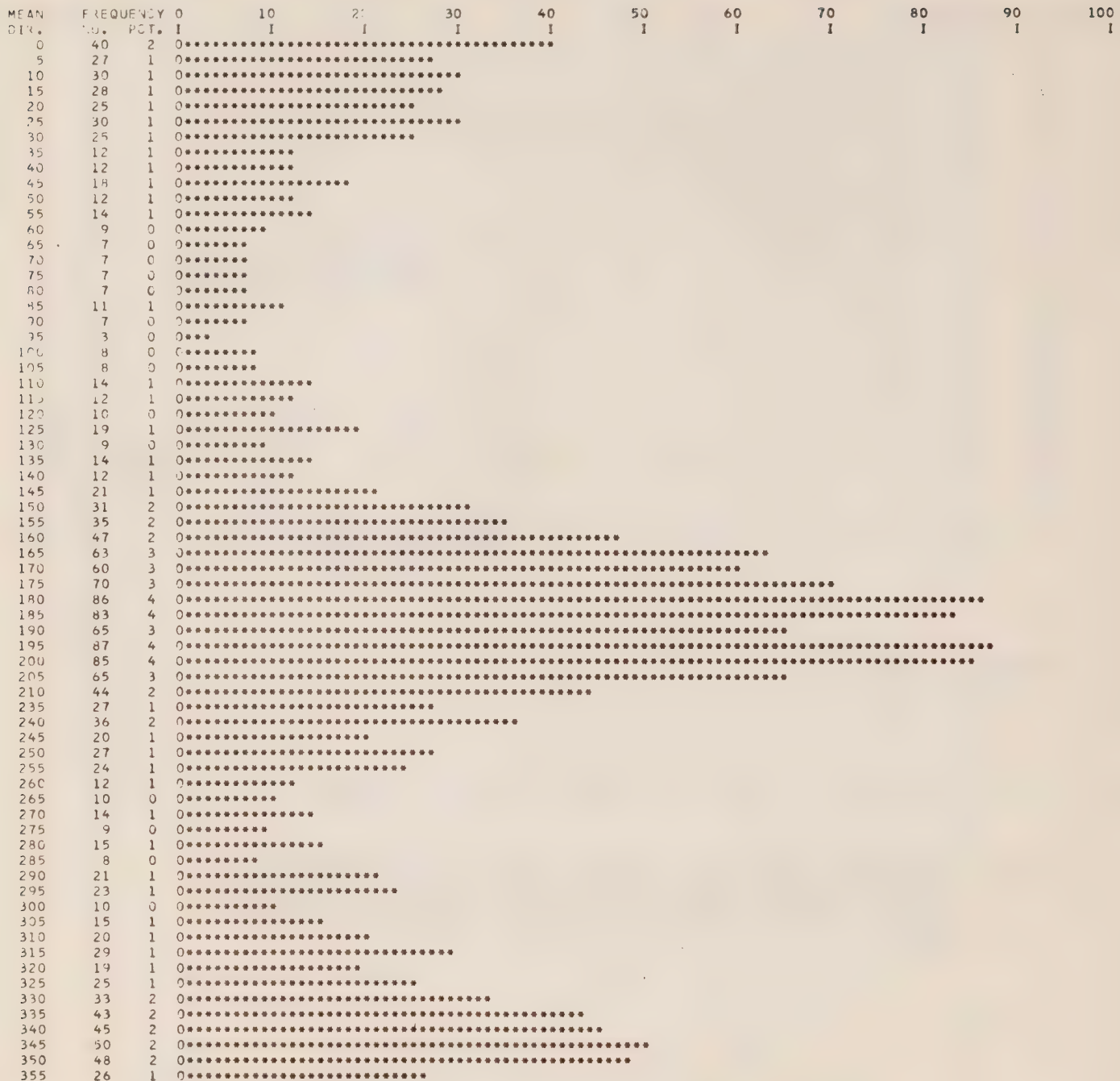
NUMBER OF OBSERVATIONS = 2041

MEAN SPEED = 85 MM/SEC

FIG. 10a. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JULY 10 THROUGH JULY 24, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 15.39/10/ 7/69 TO 20.32/24/ 7/69



NUMBER OF OBSERVATIONS = 2041

FIG. 10B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JULY 10 THROUGH JULY 24, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 15.38/10/ 7/68 TO 20.32/24/ 7/68

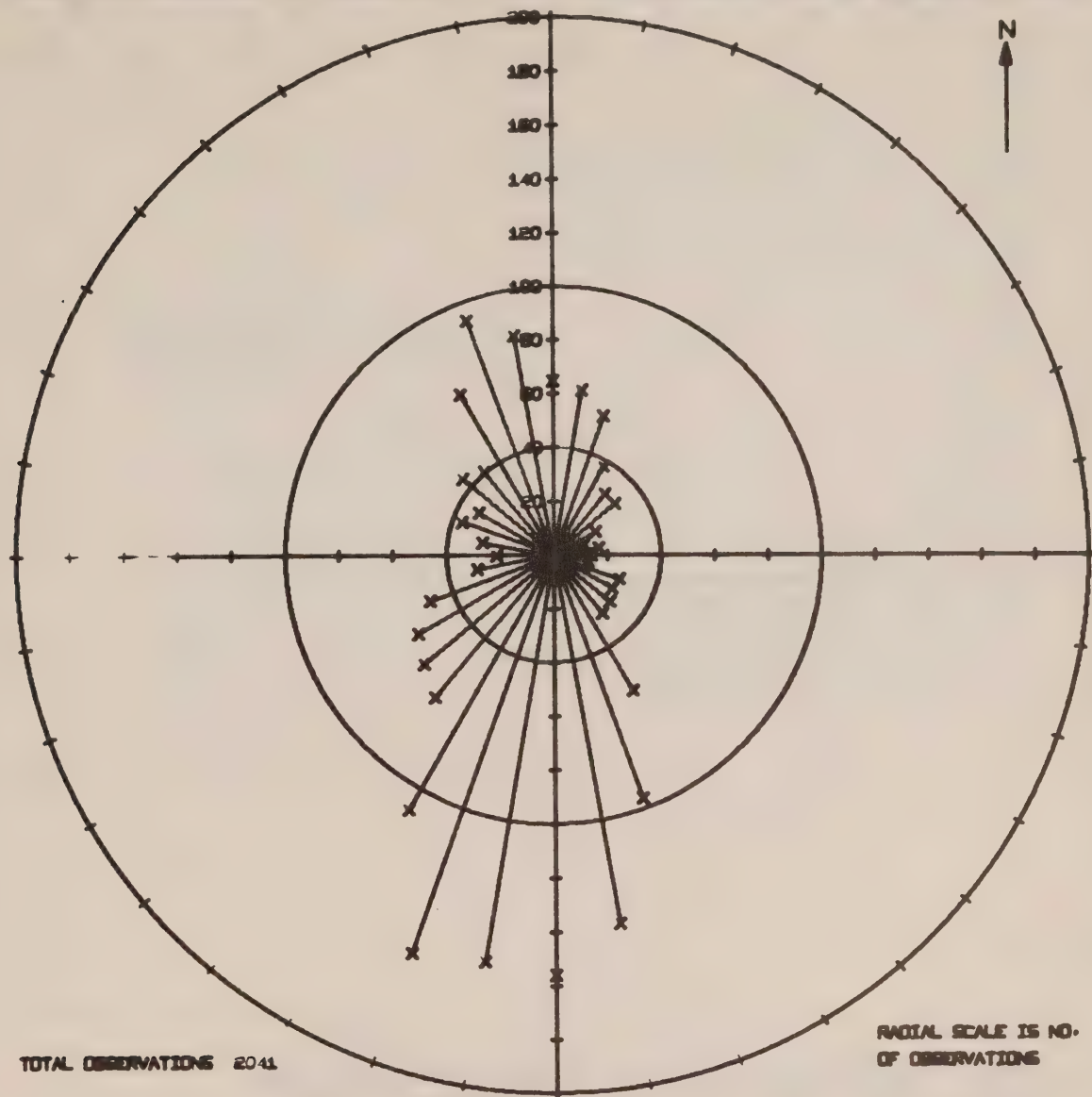


FIG. 10c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE), IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JULY 10 THROUGH JULY 24, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 15.39/10/ 7/69 TO 20.32/24/ 7/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
8.00	0	0	0									
8.05	0	0	0									
8.10	0	0	0									
8.15	0	0	0									
8.20	0	0	0									
8.25	0	0	0									
8.30	0	0	0									
8.35	0	0	0									
8.40	0	0	0									
8.45	2	0	0									
8.50	2	0	0									
8.55	0	0	0									
8.60	2	0	0									
8.65	3	0	0*									
8.70	5	0	0*									
8.75	2	0	0									
8.80	12	1	0**									
8.85	25	1	0*****									
8.90	22	1	0*****									
8.95	32	2	0*****									
9.00	32	2	0*****									
9.05	18	1	0****									
9.10	41	2	0*****									
9.15	30	1	0*****									
9.20	40	2	0*****									
9.25	59	3	0*****									
9.30	116	6	0*****									
9.35	121	6	0*****									
9.40	275	13	0*****									
9.45	236	12	0*****									
9.50	209	10	0*****									
9.55	133	7	0*****									
9.60	235	12	0*****									
9.65	166	8	0*****									
9.70	183	9	0*****									
9.75	39	2	0*****									
9.80	1	0	0									

NUMBER OF TEMP. GREATER THAN 9.80 = 0

NUMBER OF OBSERVATIONS = 2041

MEAN TEMP = 9.44 DEG. C.

FIG. 10d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JULY 10 THROUGH JULY 24, 1969.

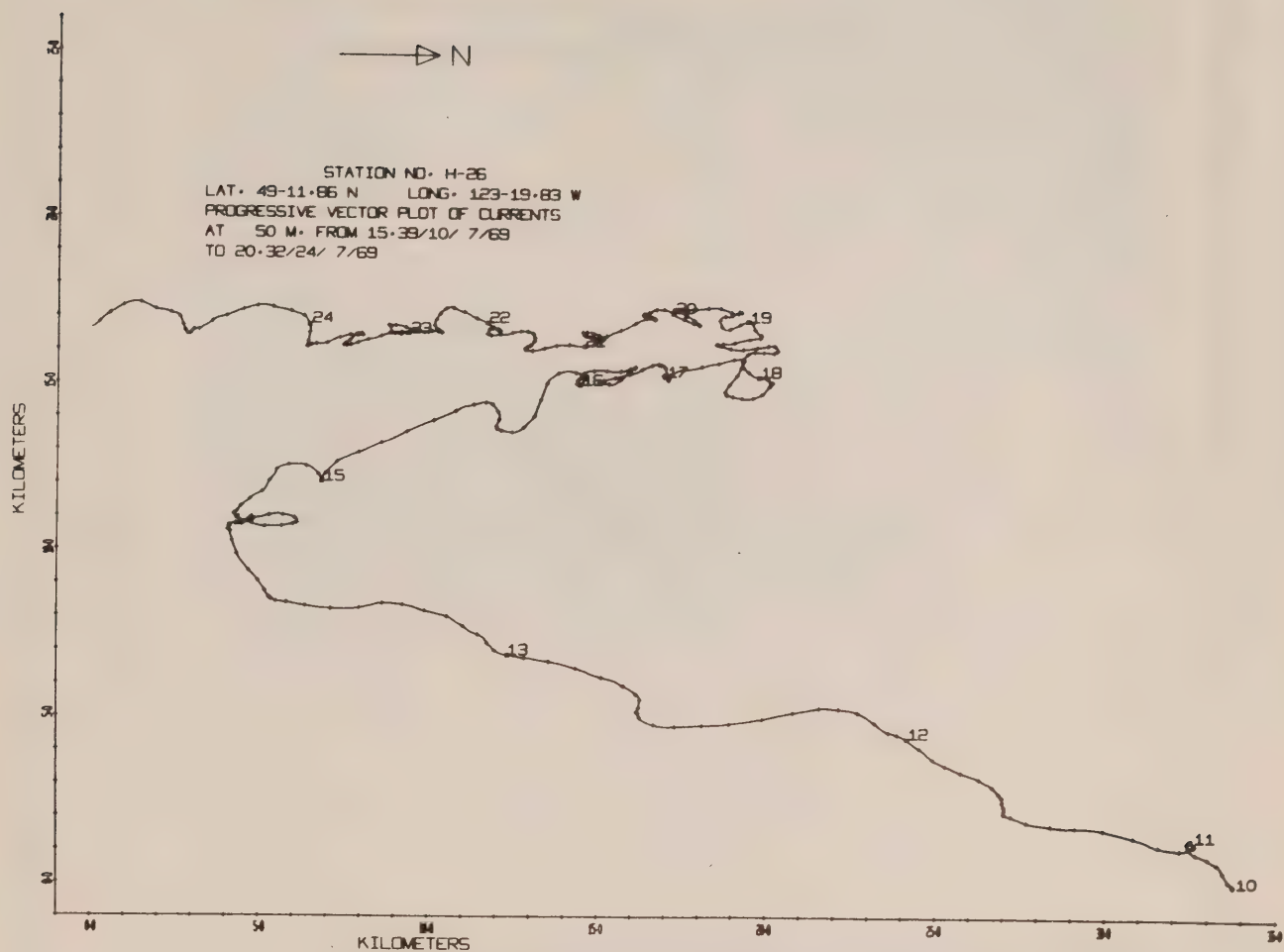


Fig. 10e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 14-day period during July 10 through July 24, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 12.27/28/ 8/69 TO 8.20/18/ 9/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	200	7	0	.....								
20	116	4	0	.....								
30	151	5	0	.....								
40	313	10	0	.....								
50	229	8	0	.....								
60	349	12	0	.....								
70	194	6	0	.....								
80	243	8	0	.....								
90	143	5	0	.....								
100	108	4	0	.....								
110	132	4	0	.....								
120	78	3	0	.....								
130	104	3	0	.....								
140	73	2	0	.....								
150	92	3	0	.....								
160	59	2	0	.....								
170	49	2	0	.....								
180	85	3	0	.....								
190	44	1	0	.....								
200	61	2	0	.....								
210	21	1	0	.....								
220	45	2	0	.....								
230	37	1	0	.....								
240	14	0	0	.....								
250	22	1	0	.....								
260	7	0	0	.....								
270	11	0	0	.....								
280	9	0	0	.....								
290	7	0	0	.....								

NUMBER OF SPEEDS GREATER THAN 290 = 0 NUMBER OF OBSERVATIONS = 2996 MEAN SPEED = 88 MM/SEC

FIG. 11A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.88 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 12.27/24/ 8/69 TO 8.20/18/ 9/69



NUMBER OF OBSERVATIONS = 2996

FIG. 11b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 12.27/28/ 8/69 TO 8.20/18/ 9/69

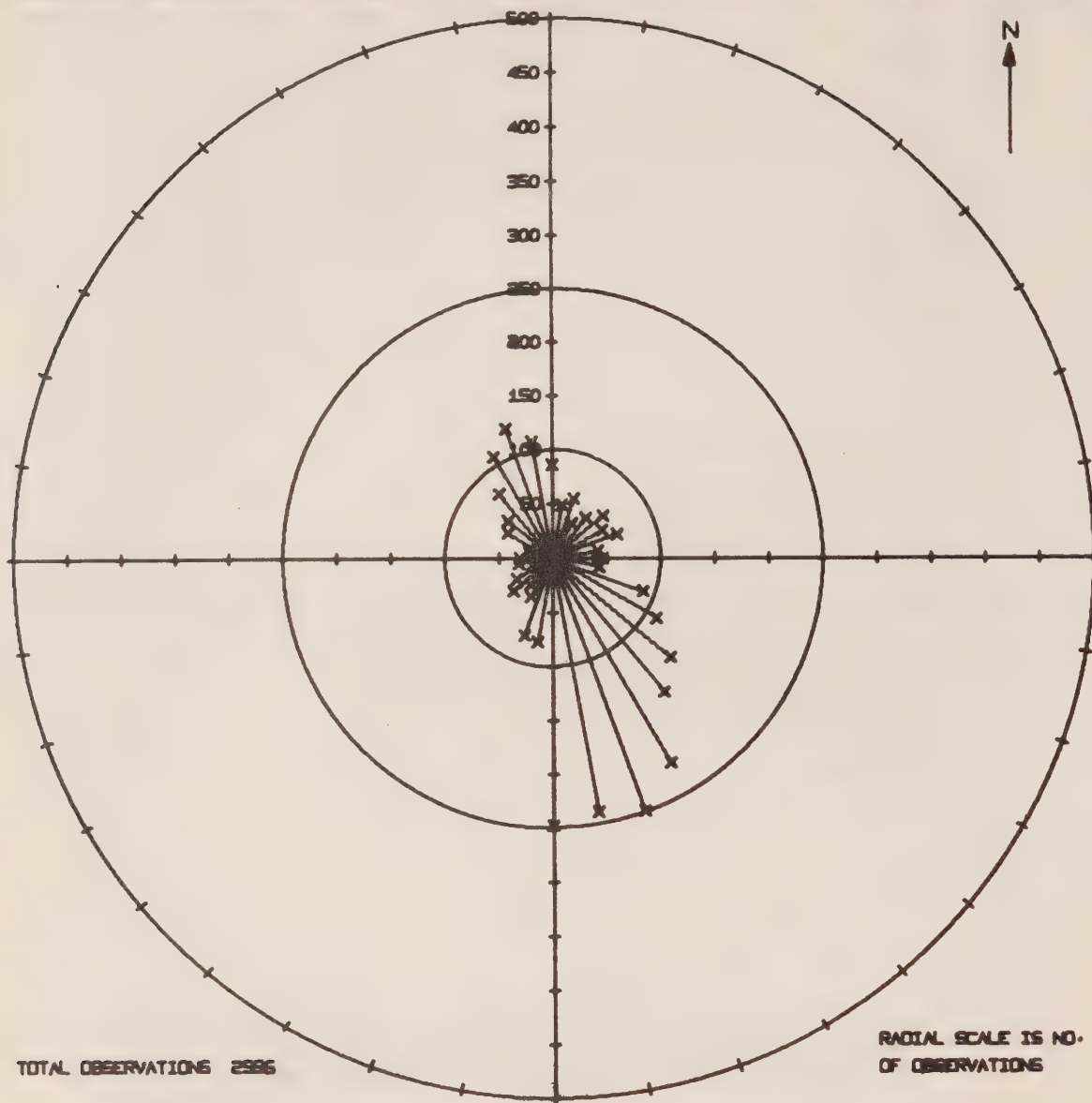


FIG. 11c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H-26 LAT. 49-11.46 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 12.27/29/ 8/69 TO 8.20/18/ 9/69

MLAN TEMP.	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I	I
8.00	0	0	0										
8.05	0	0	0										
8.10	0	0	0										
8.15	0	0	0										
8.20	0	0	0										
8.25	0	0	0										
8.30	0	0	0										
8.35	0	0	0										
8.40	0	0	0										
8.45	0	0	0										
8.50	0	0	0										
8.55	0	0	0										
8.60	0	0	0										
8.65	0	0	0										
8.70	0	0	0										
8.75	0	0	0										
8.80	0	0	0										
8.85	0	0	0										
8.90	14	0	0***										
8.95	82	3	0*****										
9.00	206	7	0*****										
9.05	167	6	0*****										
9.10	368	12	0*****										
9.15	347	12	0*****										
9.20	425	14	0*****										
9.25	253	8	0*****										
9.30	261	9	0*****										
9.35	215	7	0*****										
9.40	354	12	0*****										
9.45	80	3	0*****										
9.50	90	3	0*****										
9.55	19	1	0****										
9.60	47	2	0*****										
9.65	57	2	0*****										
9.70	11	0	0**										

NUMBER OF TEMP. GREATER THAN 9.70 = 0

NUMBER OF OBSERVATIONS = 2996

MEAN TEMP = 9.23 DEG. C.

FIG. 11b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

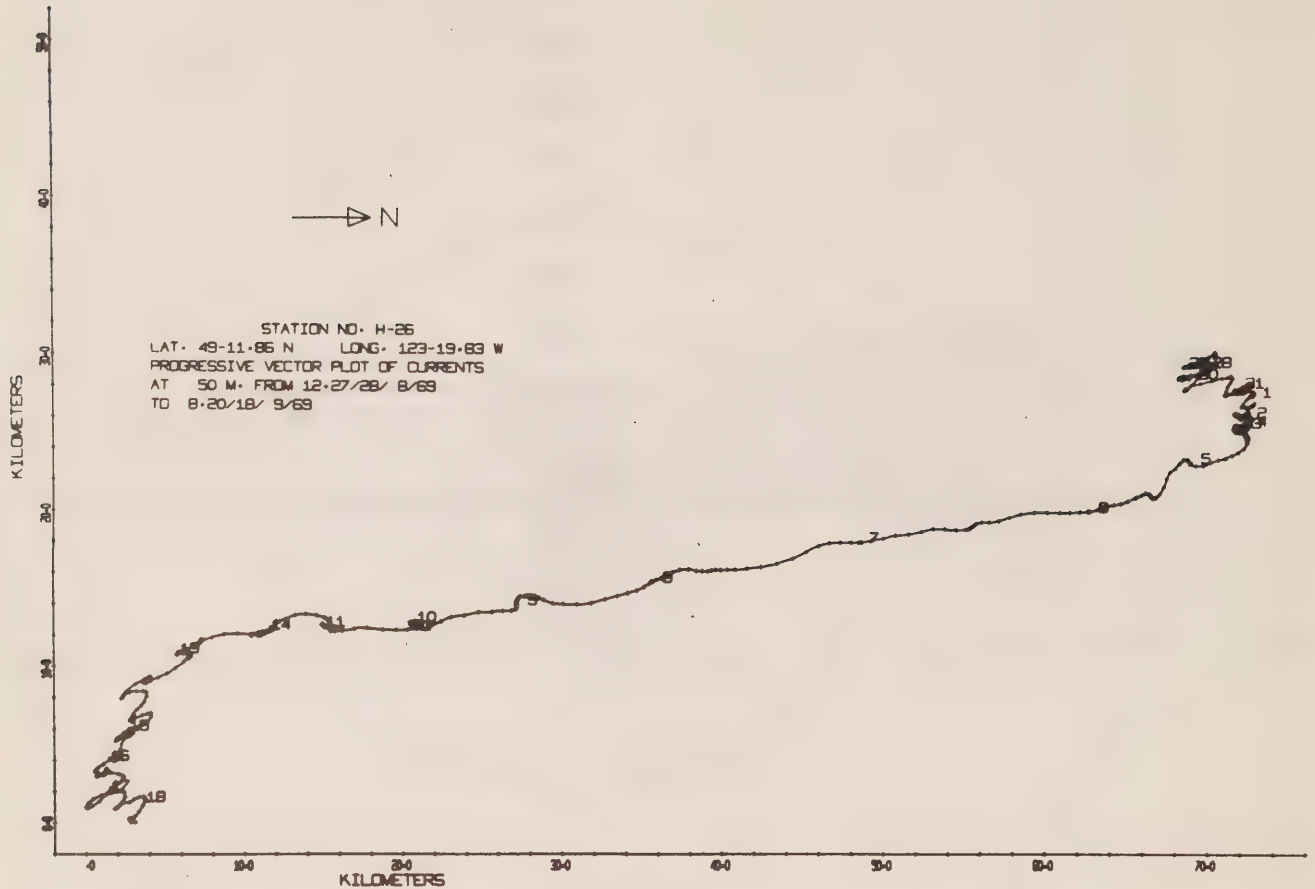


Fig. 11e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 21-day period during August 28 through September 18, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11. 5/18/ 9/69 TO 9.14/16/10/69

MEAN SPEED	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I
0	0	0	0					
10	278	7	0	0	0	0	0	0
20	140	3	0	0	0	0	0	0
30	192	5	0	0	0	0	0	0
40	485	12	0	0	0	0	0	0
50	330	8	0	0	0	0	0	0
60	502	13	0	0	0	0	0	0
70	310	8	0	0	0	0	0	0
80	321	8	0	0	0	0	0	0
90	204	5	0	0	0	0	0	0
100	181	5	0	0	0	0	0	0
110	193	5	0	0	0	0	0	0
120	90	2	0	0	0	0	0	0
130	146	4	0	0	0	0	0	0
140	96	2	0	0	0	0	0	0
150	83	2	0	0	0	0	0	0
160	80	2	0	0	0	0	0	0
170	59	1	0	0	0	0	0	0
180	75	2	0	0	0	0	0	0
190	34	1	0	0	0	0	0	0
200	58	1	0	0	0	0	0	0
210	24	1	0	0	0	0	0	0
220	49	1	0	0	0	0	0	0
230	20	0	0	0	0	0	0	0
240	14	0	0	0	0	0	0	0
250	16	0	0	0	0	0	0	0
260	3	0	0	0	0	0	0	0
270	5	0	0	0	0	0	0	0
280	1	0	0	0	0	0	0	0
290	6	0	0	0	0	0	0	0
300	2	0	0	0	0	0	0	0
31	1	0	0	0	0	0	0	0
320	1	0	0	0	0	0	0	0
330	2	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 330 = 0 NUMBER OF OBSERVATIONS = 4015

MEAN SPEED = 81 MM/SEC

FIG. 12A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 11. 5/18/ 9/69 TO 9.14/16/10/69

MEAN DIR.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400
0	207	5	0	0	0	0	0	0	0	0	0
5	200	5	0	0	0	0	0	0	0	0	0
10	167	4	0	0	0	0	0	0	0	0	0
15	137	3	0	0	0	0	0	0	0	0	0
20	129	3	0	0	0	0	0	0	0	0	0
25	87	2	0	0	0	0	0	0	0	0	0
30	93	2	0	0	0	0	0	0	0	0	0
35	90	2	0	0	0	0	0	0	0	0	0
40	69	2	0	0	0	0	0	0	0	0	0
45	71	2	0	0	0	0	0	0	0	0	0
50	69	2	0	0	0	0	0	0	0	0	0
55	61	2	0	0	0	0	0	0	0	0	0
60	81	2	0	0	0	0	0	0	0	0	0
65	65	2	0	0	0	0	0	0	0	0	0
70	72	2	0	0	0	0	0	0	0	0	0
75	47	1	0	0	0	0	0	0	0	0	0
80	40	1	0	0	0	0	0	0	0	0	0
85	41	1	0	0	0	0	0	0	0	0	0
90	43	1	0	0	0	0	0	0	0	0	0
95	32	1	0	0	0	0	0	0	0	0	0
100	36	1	0	0	0	0	0	0	0	0	0
105	29	1	0	0	0	0	0	0	0	0	0
110	32	1	0	0	0	0	0	0	0	0	0
115	35	1	0	0	0	0	0	0	0	0	0
120	34	1	0	0	0	0	0	0	0	0	0
125	31	1	0	0	0	0	0	0	0	0	0
130	52	1	0	0	0	0	0	0	0	0	0
135	36	1	0	0	0	0	0	0	0	0	0
140	46	1	0	0	0	0	0	0	0	0	0
145	47	1	0	0	0	0	0	0	0	0	0
150	50	1	0	0	0	0	0	0	0	0	0
155	30	1	0	0	0	0	0	0	0	0	0
160	28	1	0	0	0	0	0	0	0	0	0
165	13	0	0	0	0	0	0	0	0	0	0
170	17	0	0	0	0	0	0	0	0	0	0
175	29	1	0	0	0	0	0	0	0	0	0
180	36	1	0	0	0	0	0	0	0	0	0
185	21	1	0	0	0	0	0	0	0	0	0
190	17	0	0	0	0	0	0	0	0	0	0
195	14	0	0	0	0	0	0	0	0	0	0
200	26	1	0	0	0	0	0	0	0	0	0
205	20	0	0	0	0	0	0	0	0	0	0
210	18	0	0	0	0	0	0	0	0	0	0
215	16	0	0	0	0	0	0	0	0	0	0
220	15	0	0	0	0	0	0	0	0	0	0
225	5	0	0	0	0	0	0	0	0	0	0
230	12	0	0	0	0	0	0	0	0	0	0
235	10	0	0	0	0	0	0	0	0	0	0
240	15	0	0	0	0	0	0	0	0	0	0
245	11	0	0	0	0	0	0	0	0	0	0
250	18	0	0	0	0	0	0	0	0	0	0
255	16	0	0	0	0	0	0	0	0	0	0
260	30	1	0	0	0	0	0	0	0	0	0
265	21	1	0	0	0	0	0	0	0	0	0
270	23	1	0	0	0	0	0	0	0	0	0
275	32	1	0	0	0	0	0	0	0	0	0
280	24	1	0	0	0	0	0	0	0	0	0
285	24	1	0	0	0	0	0	0	0	0	0
290	28	1	0	0	0	0	0	0	0	0	0
295	24	1	0	0	0	0	0	0	0	0	0
300	35	1	0	0	0	0	0	0	0	0	0
305	34	1	0	0	0	0	0	0	0	0	0
310	48	1	0	0	0	0	0	0	0	0	0
315	73	2	0	0	0	0	0	0	0	0	0
320	80	2	0	0	0	0	0	0	0	0	0
325	80	2	0	0	0	0	0	0	0	0	0
330	117	3	0	0	0	0	0	0	0	0	0
335	109	3	0	0	0	0	0	0	0	0	0
340	128	3	0	0	0	0	0	0	0	0	0
345	157	4	0	0	0	0	0	0	0	0	0
350	179	4	0	0	0	0	0	0	0	0	0
355	153	4	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 4015

FIG. 12B. A HISTOGRAM OF DIRECTION (*TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 11. 5/18/ 9/69 TO 9.14/16/10/69

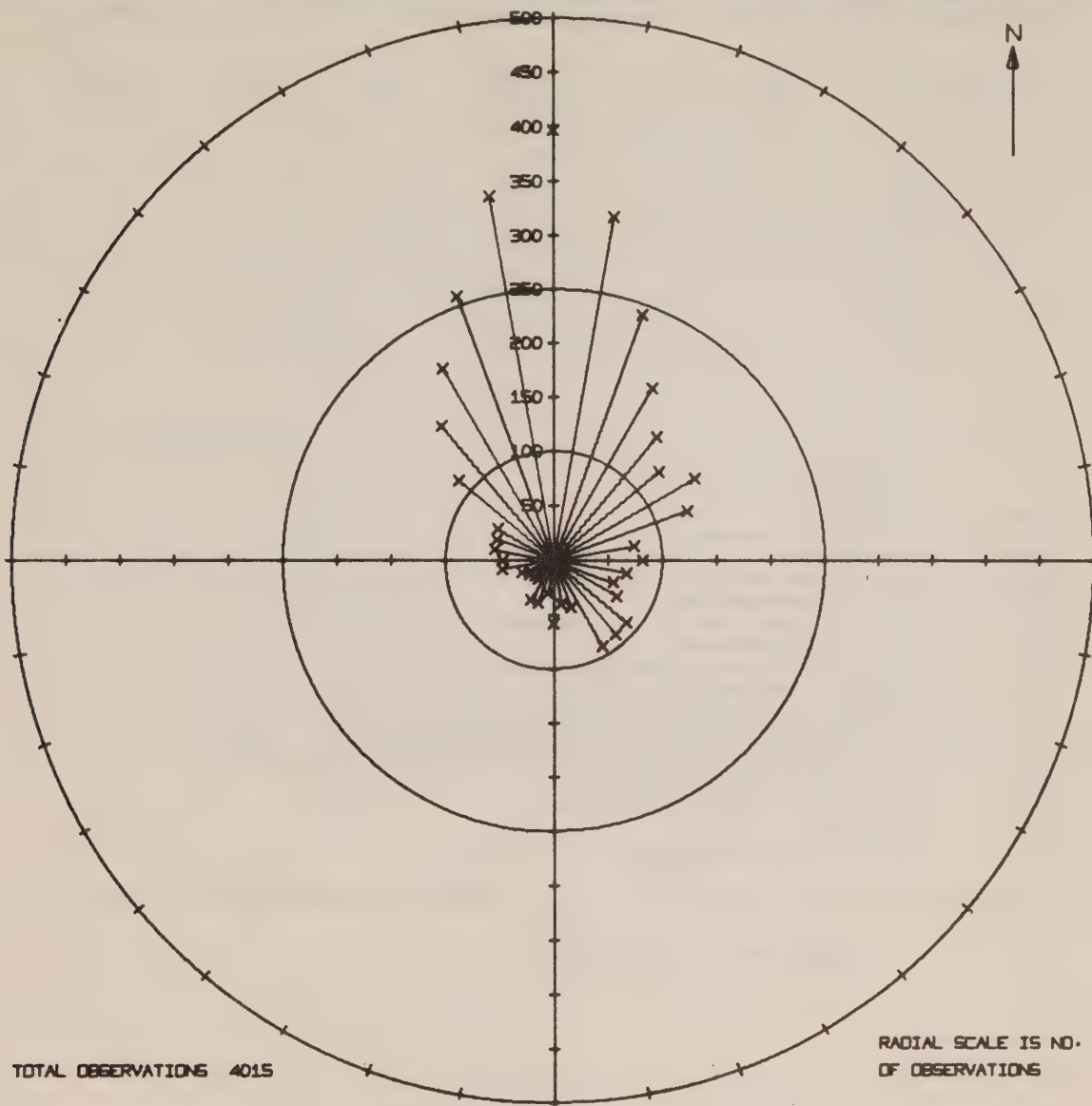


FIG. 12c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 11. 5/18/ 9/69 TO 9.14/16/10/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I
8.00	0	0 0						
8.05	0	0 0						
8.10	0	0 0						
8.15	0	0 0						
8.20	0	0 0						
8.25	0	0 0						
8.30	0	0 0						
8.35	0	0 0						
8.40	0	0 0						
8.45	0	0 0						
8.50	0	0 0						
8.55	0	0 0						
8.60	1	0 0						
8.65	1	0 0						
8.70	2	0 0						
8.75	18	0 0**						
8.80	52	1 0*****						
8.85	46	1 0*****						
8.90	144	4 0*****						
8.95	90	2 0*****						
9.00	131	3 0*****						
9.05	174	4 0*****						
9.10	287	7 0*****						
9.15	233	6 0*****						
9.20	344	9 0*****						
9.25	243	6 0*****						
9.30	556	14 0*****						
9.35	411	10 0*****						
9.40	517	13 0*****						
9.45	259	6 0*****						
9.50	256	6 0*****						
9.55	64	2 0*****						
9.60	186	5 0*****						

NUMBER OF TEMP. GREATER THAN 9.60 = 0

NUMBER OF OBSERVATIONS = 4015

MEAN TEMP = 9.27 DEG. C.

FIG. 12b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

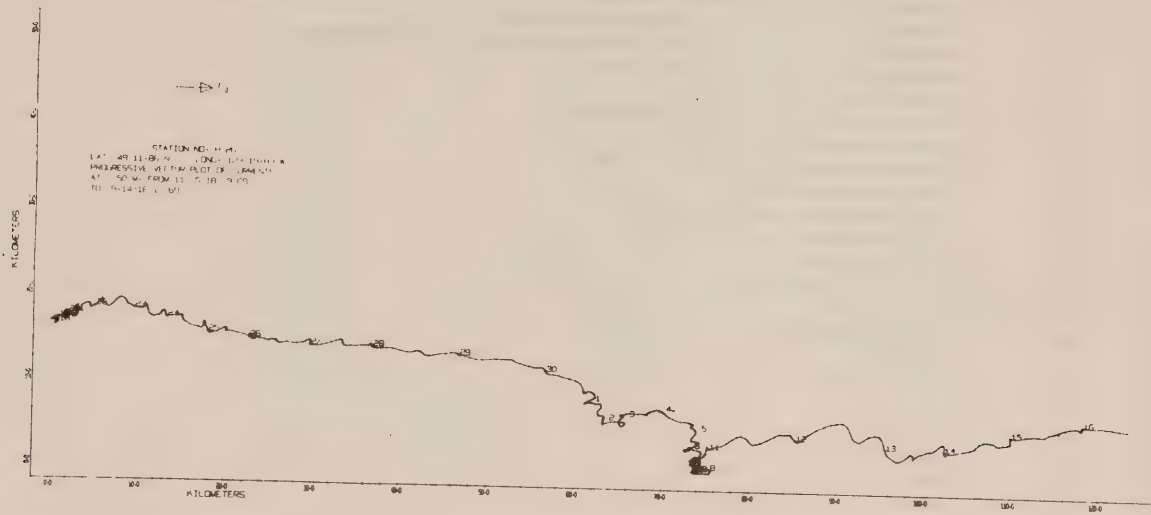


Fig. 12e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 28-day period during September 18 through October 16, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14.17/16/10/69 TO 8. 9/25/11/69

MEAN SPEED	FREQUENCY NO.	PCT. PCT.	0 I	100 I	200 I	300 I	400 I	500 I	600 I	700 I
0	0	0	0							
10	324	6	0	*****						
20	180	3	0	*****						
30	231	4	0	*****						
40	492	9	0	*****						
50	369	6	0	*****						
60	644	11	0	*****						
70	327	6	0	*****						
80	466	8	0	*****						
90	254	4	0	*****						
100	207	4	0	*****						
110	272	5	0	*****						
120	194	3	0	*****						
130	261	5	0	*****						
140	158	3	0	*****						
150	239	4	0	*****						
160	131	2	0	*****						
170	110	2	0	*****						
180	145	3	0	*****						
190	80	1	0	*****						
200	124	2	0	*****						
210	61	1	0	*****						
220	79	1	0	*****						
230	44	1	0	****						
240	46	1	0	****						
250	67	1	0	*****						
260	31	1	0	***						
270	50	1	0	****						
280	26	0	0	***						
290	21	0	0	**						
300	9	0	0	*						
310	10	0	0	*						
320	17	0	0	**						
330	9	0	0	*						
340	5	0	0	*						
350	4	0	0							
360	5	0	0	*						
370	2	0	0							

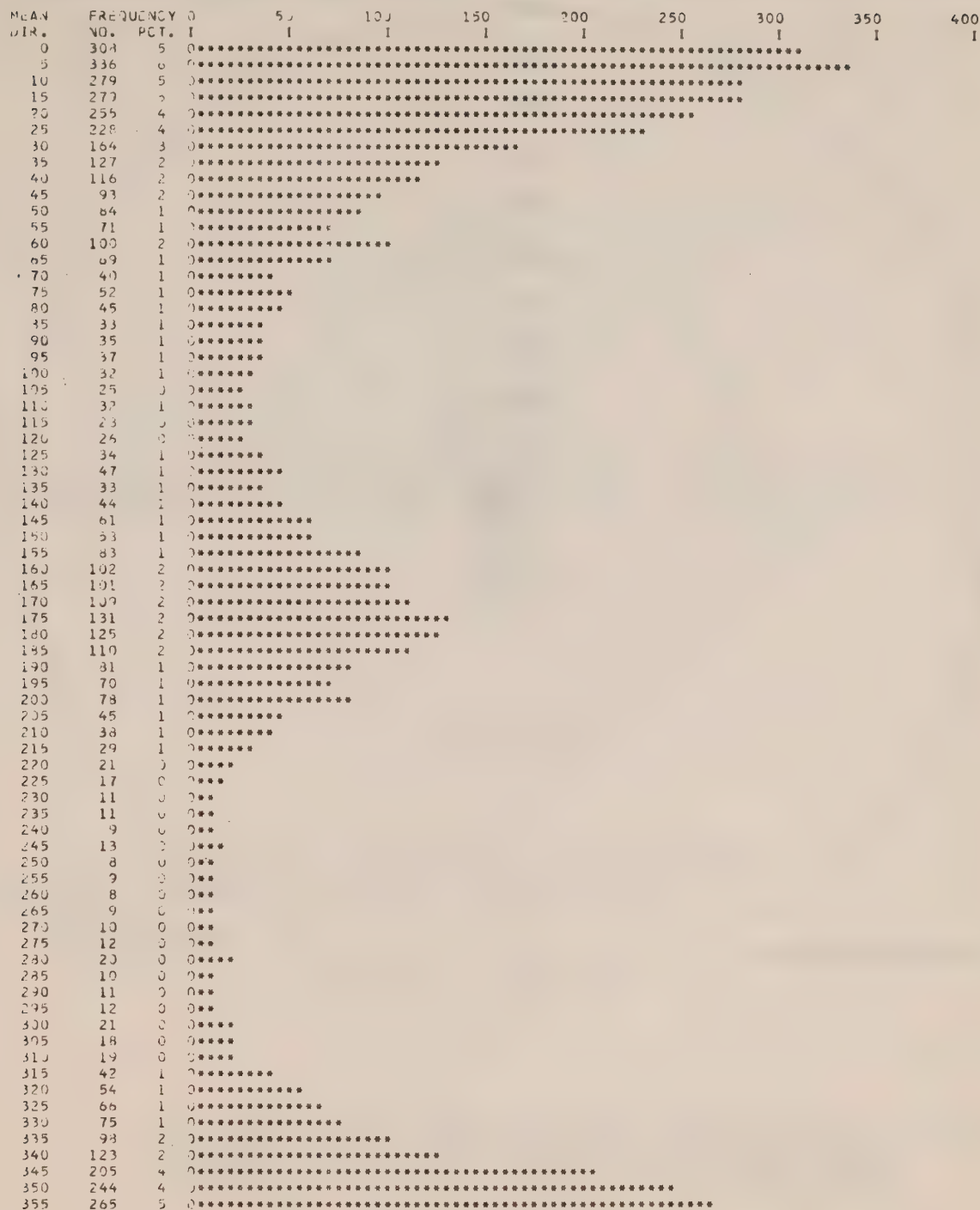
NUMBER OF SPEEDS GREATER THAN 370 = 0 NUMBER OF OBSERVATIONS = 5694

MEAN SPEED = 99 MM/SEC

FIG. 13A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14.17/15/10/69 TO 8. 9/25/11/69



NUMBER OF OBSERVATIONS = 5694

FIG. 13B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 14.17/16/10/69 TO 8. 9/25/11/69

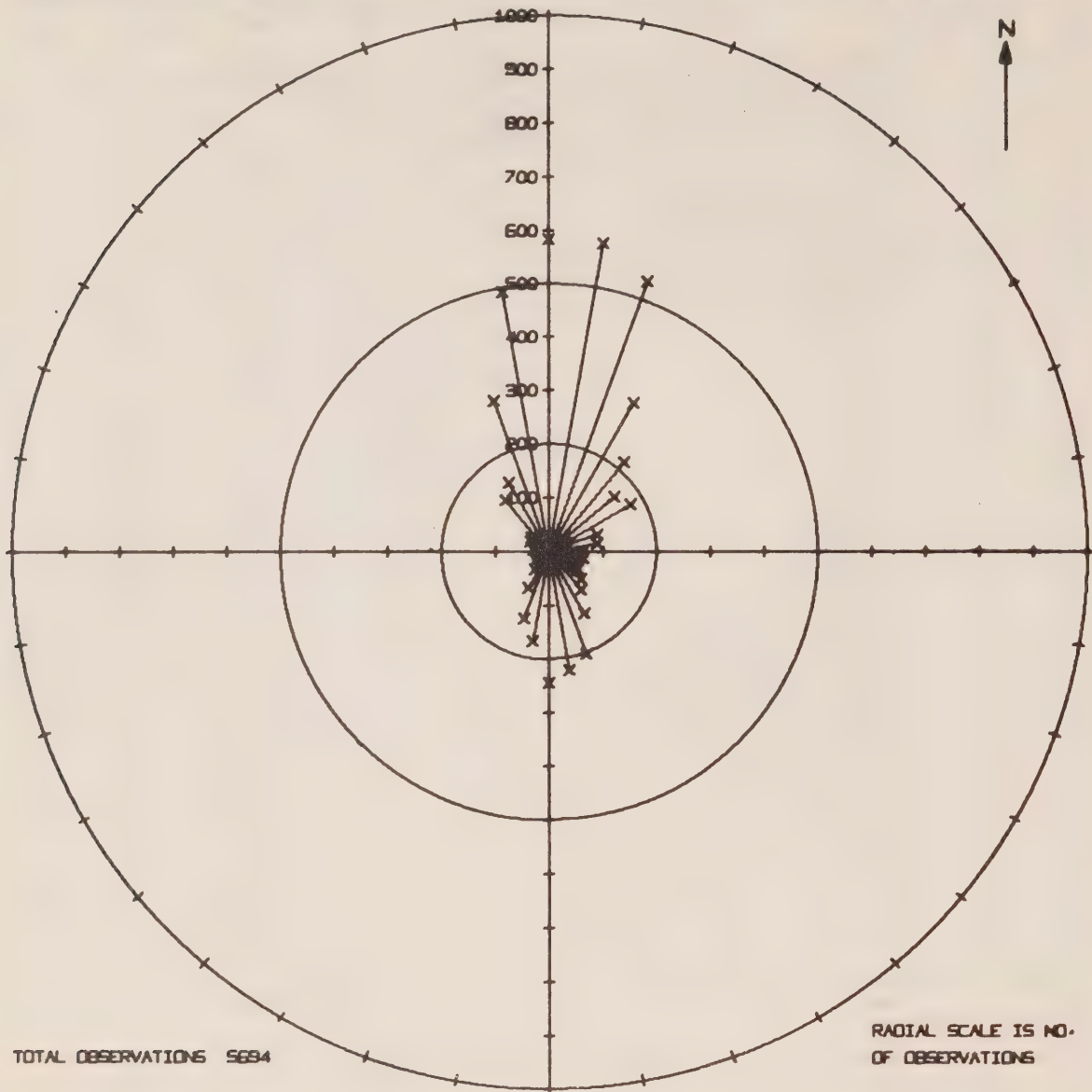


FIG. 13c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 14.17/15/10/69 TO 9. 9/25/11/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I	1600 I	1800 I	2000 I
8.00	0	0										
8.05	0	0										
8.10	0	0										
8.15	0	0										
8.20	0	0										
8.25	0	0										
8.30	0	0										
8.35	0	0										
8.40	0	0										
8.45	0	0										
8.50	0	0										
8.55	0	0										
8.60	0	0										
8.65	0	0										
8.70	0	0										
8.75	0	0										
8.80	0	0										
8.85	0	0										
8.90	10	0										
8.95	396	7										
9.00	647	11										
9.05	507	9										
9.10	385	7										
9.15	895	16										
9.20	1658	29										
9.25	375	7										
9.30	456	8										
9.35	316	5										
9.40	49	1										

NUMBER OF TEMP. GREATER THAN 9.40 = 0

NUMBER OF OBSERVATIONS = 5694

MEAN TEMP = 9.15 DEG. C.

FIG. 13b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

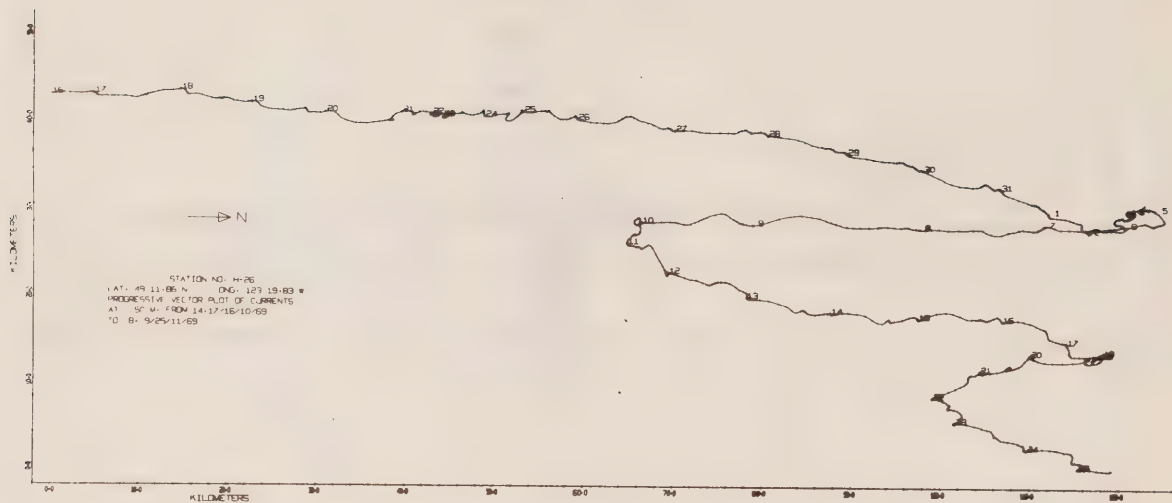


Fig. 13e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 40-day period during October 16 through November 25, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.84 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 10.24/25/11/69 TO 10.57/9/1/70

	PERCENTAGE	100	200	300	400	500	600
	NO. OF OBS.	I	I	I	I	I	I
0	4.6	1					
10	13.3	2					
20	10.8	1					
30	4.4	0					
40	31.7	5					
50	50.6	8					
60	3.7	0					
70	4.8	1					
80	2.1	0					
90	2.1	0					
100	3.5	0					
110	2.1	0					
120	2.35	0					
130	1.0	0					
140	2.4	0					
150	1.4	0					
160	1.0	0					
170	2.4	0					
180	1.7	0					
190	1.25	0					
200	1.4	0					
210	1.0	0					
220	1.0	0					
230	1.0	0					
240	1.0	0					
250	1.0	0					
260	1.0	0					
270	1.0	0					
280	1.0	0					
290	1.0	0					
300	1.0	0					
310	1.0	0					
320	1.0	0					
330	1.0	0					
340	1.0	0					
350	1.0	0					
360	1.0	0					
370	1.0	0					
380	1.0	0					
390	1.0	0					
400	1.0	0					
410	1.0	0					
420	1.0	0					
430	1.0	0					
440	1.0	0					

NUMBER OF SPEEDS GREATER THAN 440 = 1

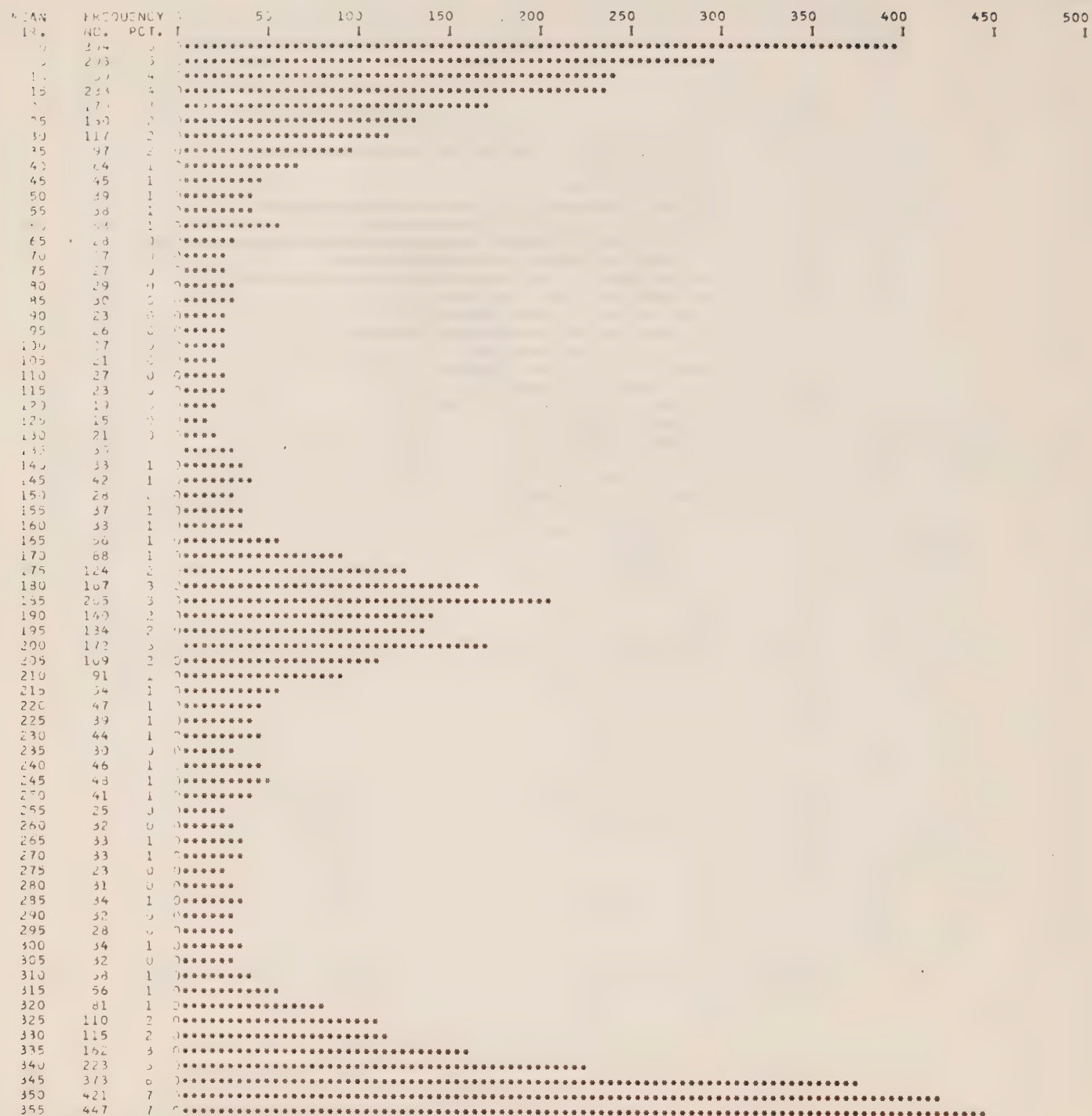
NUMBER OF OBSERVATIONS = 6456

MEAN SPEED = 123 MM/SEC

FIG. 14A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 45-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 10.29/25/11/69 TO 10.5/9/1/70



NUMBER OF OBSERVATIONS = 6456

FIG. 14B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 45-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.89 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 10.29/25/11/69 TO 10.5/9/1/70

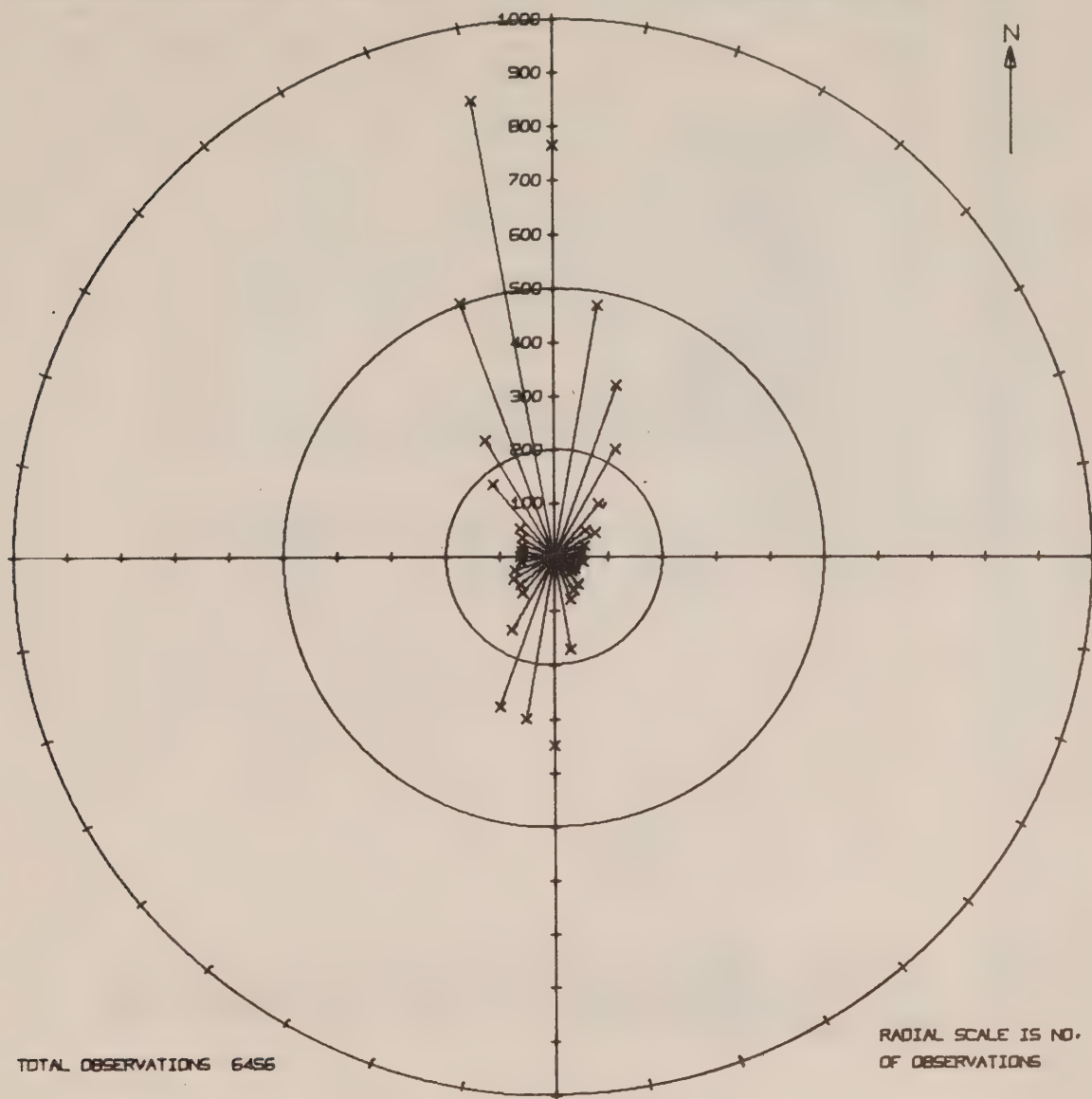


FIG. 14c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 45-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970.

STATION NO. H-26 LAT. 49-11.90 N LONG. 123-19.83 W
HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 10.29/25/11/69 TO 10.5/9/1/70

TEMP.	FREQUENCY NO.	PCT. I	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I
3.00	0	0							
3.05	11	0.17							
3.10	225	3.48	0.0000000000						
3.15	207	3.19	0.0000000000						
3.20	130	2.00	0.0000000000						
3.25	213	3.29	0.0000000000						
3.30	232	3.58	0.0000000000						
3.35	234	3.62	0.0000000000						
3.40	198	3.05	0.0000000000						
3.45	121	1.86	0.0000000000						
3.50	159	2.45	0.0000000000						
3.55	64	0.99	0.0000000000						
3.60	225	3.48	0.0000000000						
3.65	227	3.52	0.0000000000						
3.70	273	4.22	0.0000000000						
3.75	230	3.55	0.0000000000						
3.80	287	4.44	0.0000000000						
3.85	301	4.65	0.0000000000						
3.90	606	9.37	0.0000000000						
3.95	1274	19.72	0.0000000000						
4.00	803	12.42	0.0000000000						
4.05	77	1.19	0.0000000000						
4.10	124	1.91	0.0000000000						
4.15	66	1.02	0.0000000000						

NUMBER OF TEMP. GREATER THAN 3.95 = 0 NUMBER OF OBSERVATIONS = 6456

MEAN TEMP = 8.71 DEG. C.

FIG. 14b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 45-DAY PERIOD DURING NOVEMBER 25, 1969 THROUGH JANUARY 9, 1970.

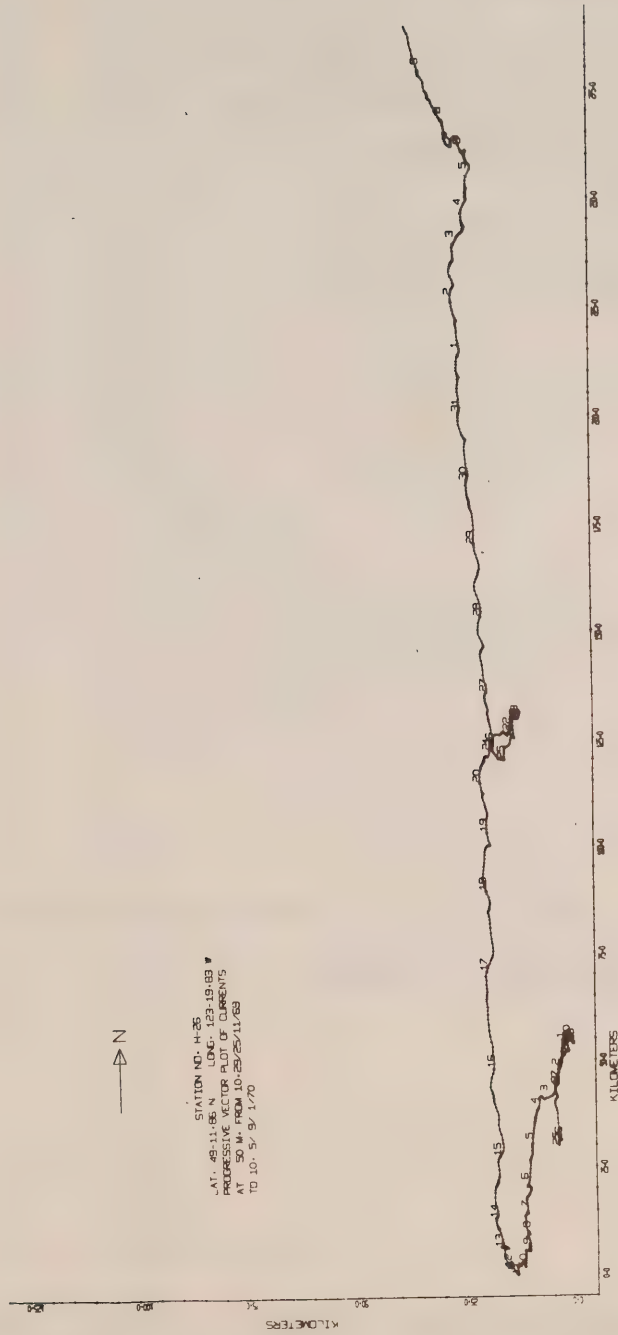


Fig. 14e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 45-day period during November 25, 1969 through January 9, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 12.46/ 9/ 1/70 TO 2. 9/23/ 1/70

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300
0	0	0	0						
10	95	5	0*****						
20	62	3	0*****						
30	112	6	0*****						
40	215	11	0*****						
50	163	8	0*****						
60	179	9	0*****						
70	104	5	0*****						
80	140	7	0*****						
90	92	5	0*****						
100	60	3	0*****						
110	107	5	0*****						
120	68	3	0*****						
130	115	6	0*****						
140	59	3	0*****						
150	61	3	0*****						
160	30	2	0*****						
170	21	1	0****						
180	25	1	0****						
190	30	2	0*****						
200	26	1	0*****						
210	23	1	0*****						
220	20	1	0****						
230	13	1	0***						
240	20	1	0****						
250	15	1	0***						
260	11	1	0**						
270	10	1	0**						
280	5	0	0*						
290	7	0	0*						
300	7	0	0*						
310	5	0	0*						
320	15	1	0***						
330	7	0	0*						
340	14	1	0***						
350	4	0	0*						
360	7	0	0*						
370	5	0	0*						
380	1	0	0						

NUMBER OF SPEEDS GREATER THAN 380 = 0

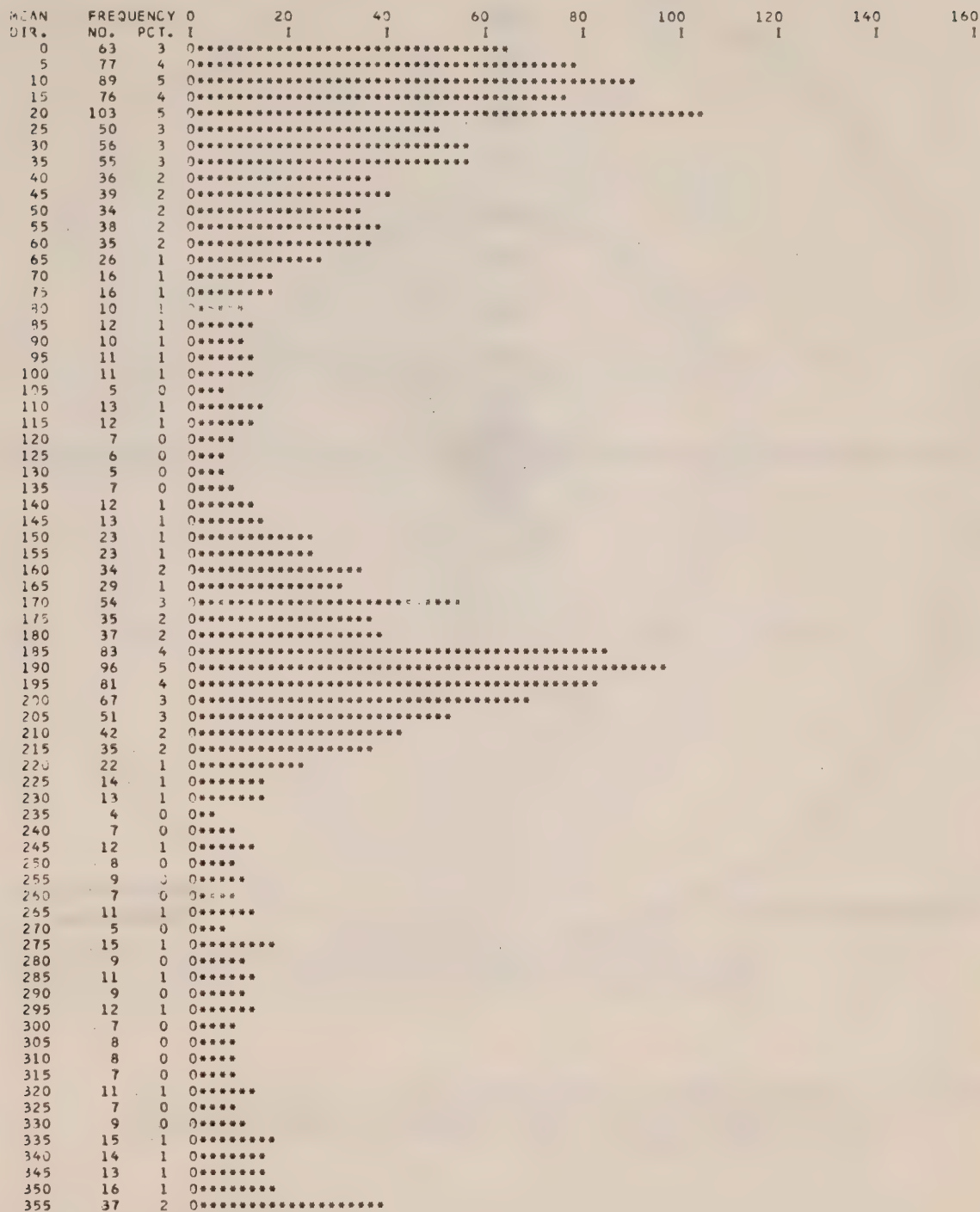
NUMBER OF OBSERVATIONS = 1953

MEAN SPEED = 98 MM/SEC

FIG. 15A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JANUARY 9 THROUGH JANUARY 22, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 12.46/ 9/ 1/70 TO 2. 2/23/ 1/70



NUMBER OF OBSERVATIONS = 1953

FIG. 15B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JANUARY 9 THROUGH JANUARY 22, 1970.

STATION NO. H-26 LAT. 49-11.85 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 12.46/ 9/ 1/70 TO 2. 9/23/ 1/70

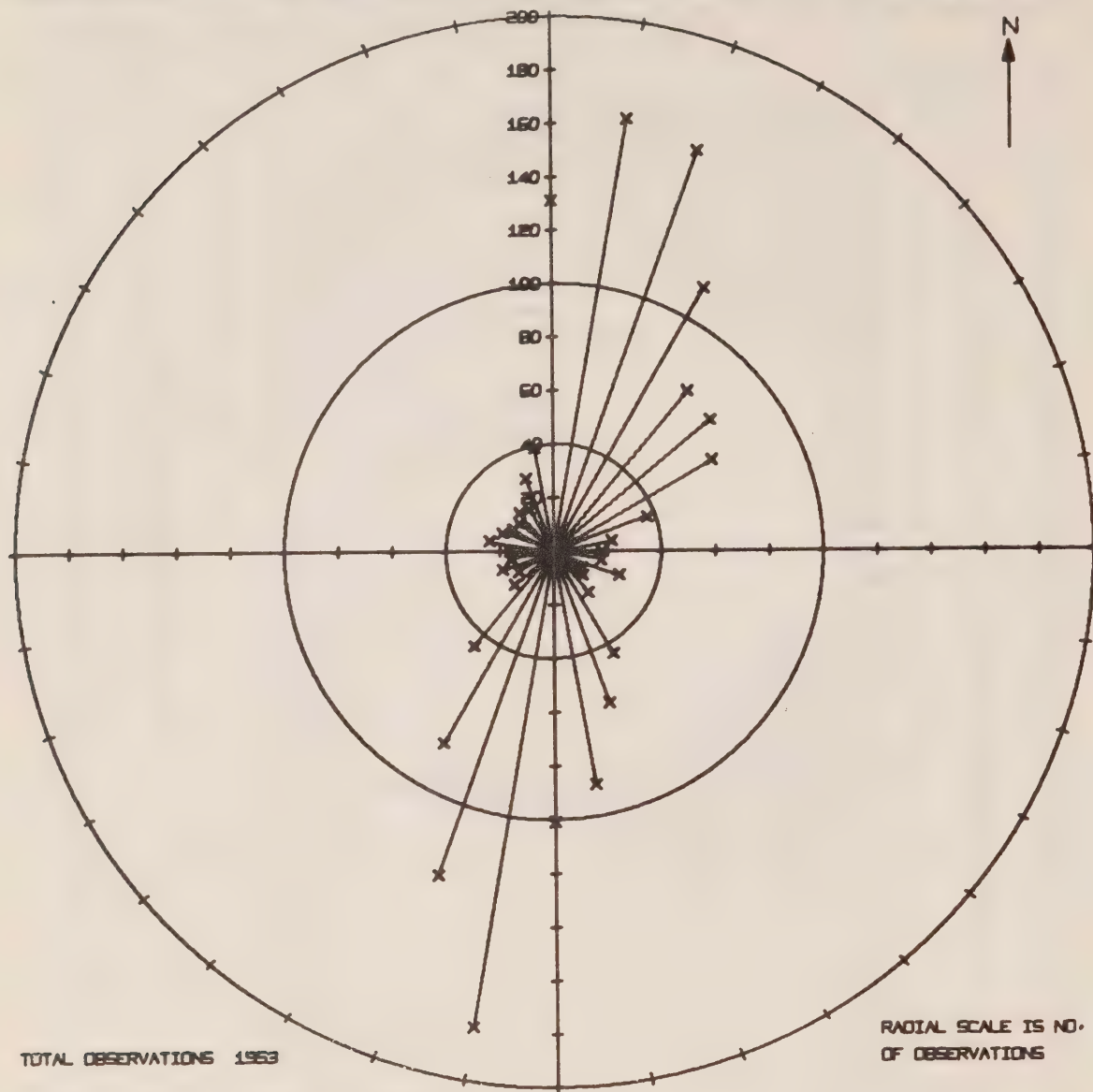


FIG. 15c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JANUARY 9 THROUGH JANUARY 22, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 12.46/ 9/ 1/70 TO 2. 9/23/ 1/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
7.00	0	0 0										
7.05	0	0 0										
7.10	0	0 0										
7.15	0	0 0										
7.20	0	0 0										
7.25	0	0 0										
7.30	0	0 0										
7.35	0	0 0										
7.40	0	0 0										
7.45	0	0 0										
7.50	0	0 0										
7.55	0	0 0										
7.60	0	0 0										
7.65	0	0 0										
7.70	71	4	0	0	0	0	0	0	0	0	0	0
7.75	339	17	0	0	0	0	0	0	0	0	0	0
7.80	57	3	0	0	0	0	0	0	0	0	0	0
7.85	100	5	0	0	0	0	0	0	0	0	0	0
7.90	396	20	0	0	0	0	0	0	0	0	0	0
7.95	310	16	0	0	0	0	0	0	0	0	0	0
8.00	224	11	0	0	0	0	0	0	0	0	0	0
8.05	104	5	0	0	0	0	0	0	0	0	0	0
8.10	94	5	0	0	0	0	0	0	0	0	0	0
8.15	109	6	0	0	0	0	0	0	0	0	0	0
8.20	16	1	0	0	0	0	0	0	0	0	0	0
8.25	38	2	0	0	0	0	0	0	0	0	0	0
8.30	7	0	0	0	0	0	0	0	0	0	0	0
8.35	13	1	0	0	0	0	0	0	0	0	0	0
8.40	3	0	0	0	0	0	0	0	0	0	0	0
8.45	5	0	0	0	0	0	0	0	0	0	0	0
8.50	12	1	0	0	0	0	0	0	0	0	0	0
8.55	30	2	0	0	0	0	0	0	0	0	0	0
8.60	16	1	0	0	0	0	0	0	0	0	0	0
8.65	9	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 8.65 = 0

NUMBER OF OBSERVATIONS = 1953

MEAN TEMP = 7.95 DEG. C.

FIG. 15d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JANUARY 9 THROUGH JANUARY 22, 1970.

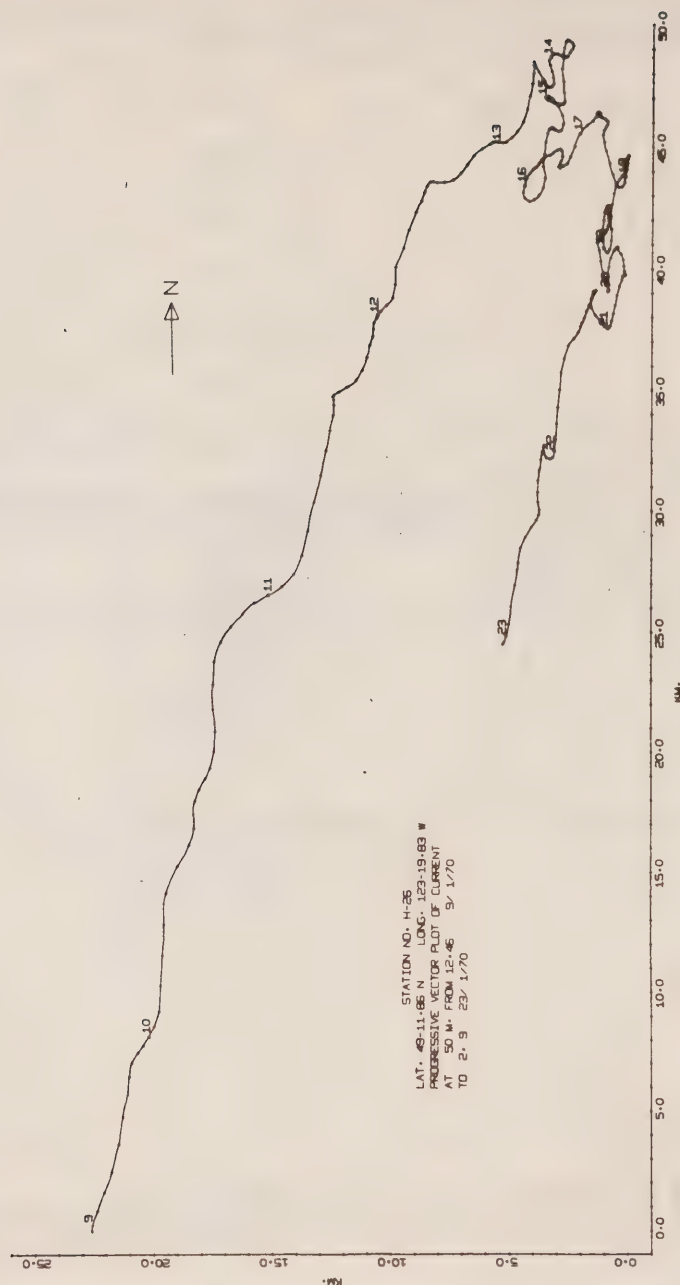
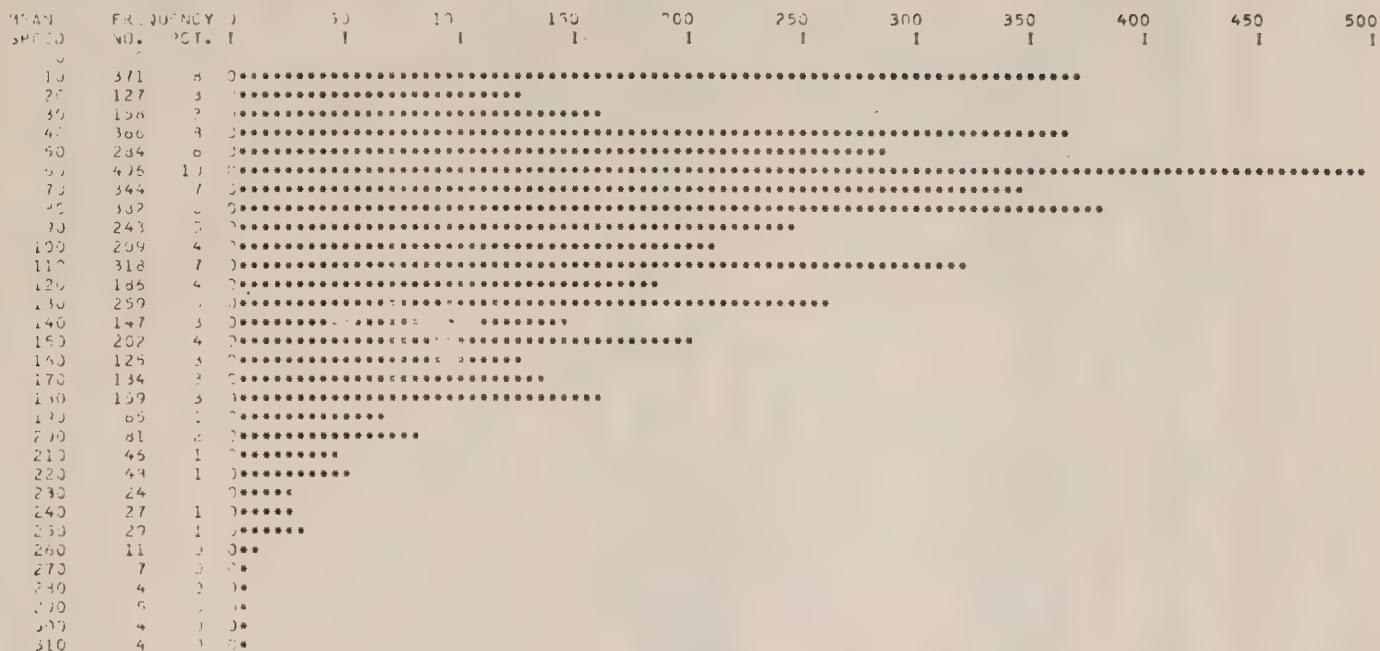


Fig. 15e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 14-day period during January 9 through January 22, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 44-11.83 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 15.43/19/ 2/70 TO 10.18/25/ 3/70

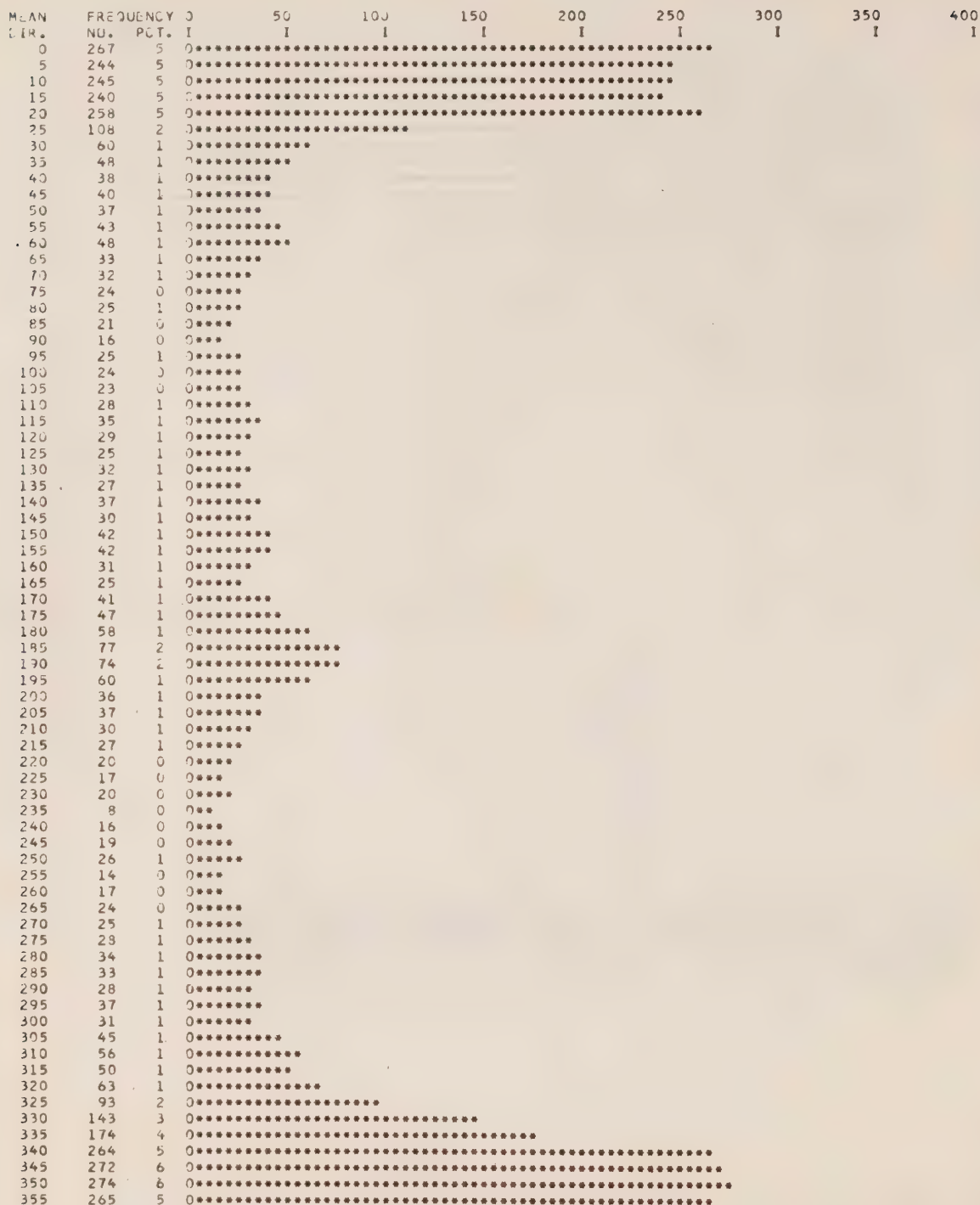


NUMBER OF SPEEDS GREATER THAN 310 = 0 NUMBER OF OBSERVATIONS = 4865 MEAN SPEED = 94 MM/SEC

FIG. 16A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 15.43/19/ 2/70 TO 10.18/25/ 3/70



NUMBER OF OBSERVATIONS = 4865

FIG. 16B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 15.43/19/ 2/70 TO 10.18/25/ 3/70



FIG. 16c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

STATION NO. H-76 LAT. 49-11.87 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 15.43/19/ 2/70 TO 10.18/25/ 3/70

TEMP.	FREQUENCY NO.	PCT. I	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I
7.00	0	0	0	0	0	0	0	0	0
7.05	0	0	0	0	0	0	0	0	0
7.10	0	0	0	0	0	0	0	0	0
7.15	0	0	0	0	0	0	0	0	0
7.20	0	0	0	0	0	0	0	0	0
7.25	0	0	0	0	0	0	0	0	0
7.30	0	0	0	0	0	0	0	0	0
7.35	0	0	0	0	0	0	0	0	0
7.40	0	0	0	0	0	0	0	0	0
7.45	0	0	0	0	0	0	0	0	0
7.50	0	0	0	0	0	0	0	0	0
7.55	100	2	0*****						
7.60	42	1	0**						
7.65	354	7	0*****						
7.70	1185	24	0*****						
7.75	1053	22	0*****						
7.80	513	11	0*****						
7.85	503	10	0*****						
7.90	339	7	0*****						
7.95	183	4	0*****						
8.00	133	3	0*****						
8.05	166	3	0*****						
8.10	178	4	0*****						
8.15	59	1	0***						
8.20	35	1	0**						
8.25	6	0	0						

NUMBER OF TEMP. GREATER THAN 8.25 = 0

NUMBER OF OBSERVATIONS = 4865

MEAN TEMP = 7.80 DEG. C.

FIG. 16D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

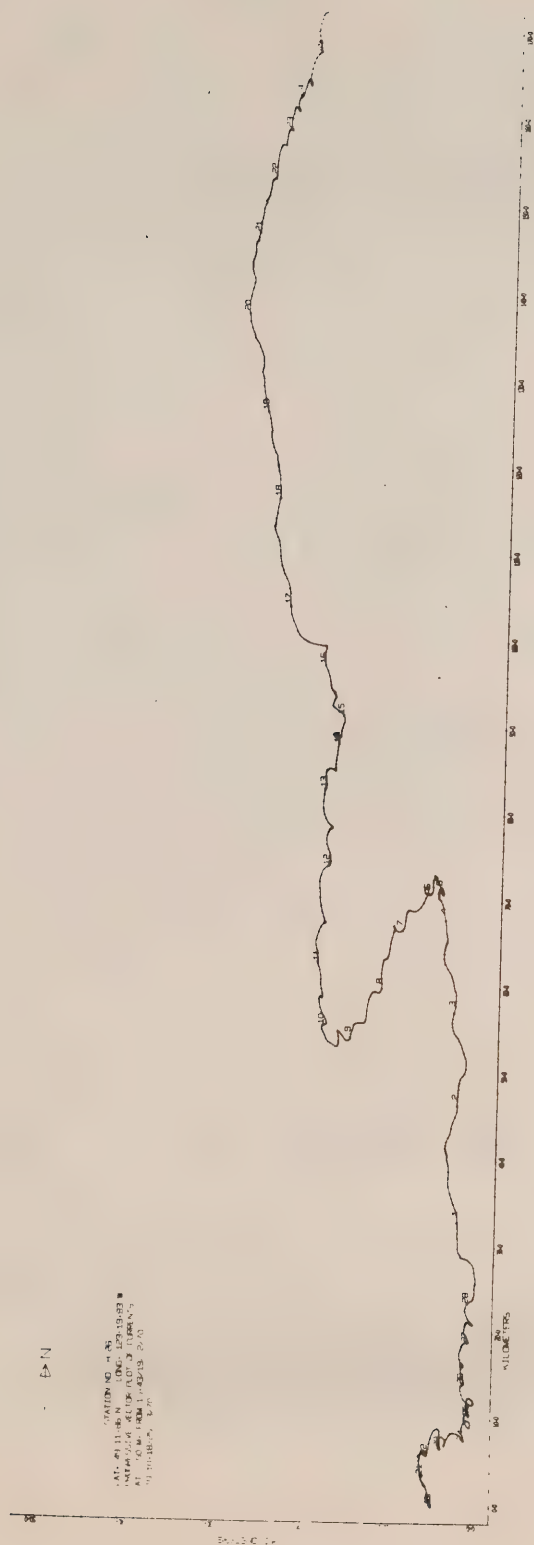
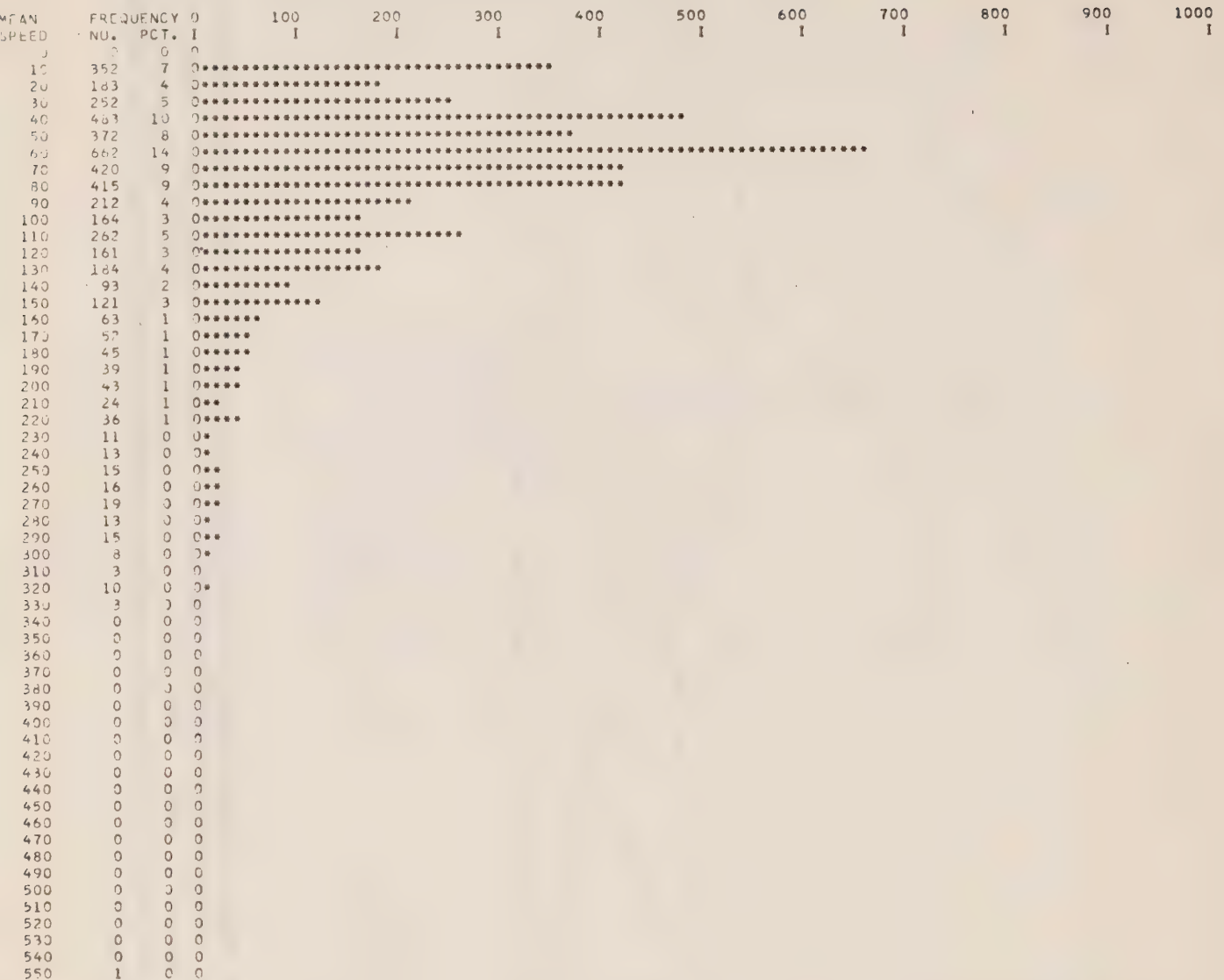


Fig. 16e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 34-day period during February 19 through March 25, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 13. 8/25/ 3/70 TO 15. 0/27/ 4/70



NUMBER OF SPEEDS GREATER THAN 550 = 0

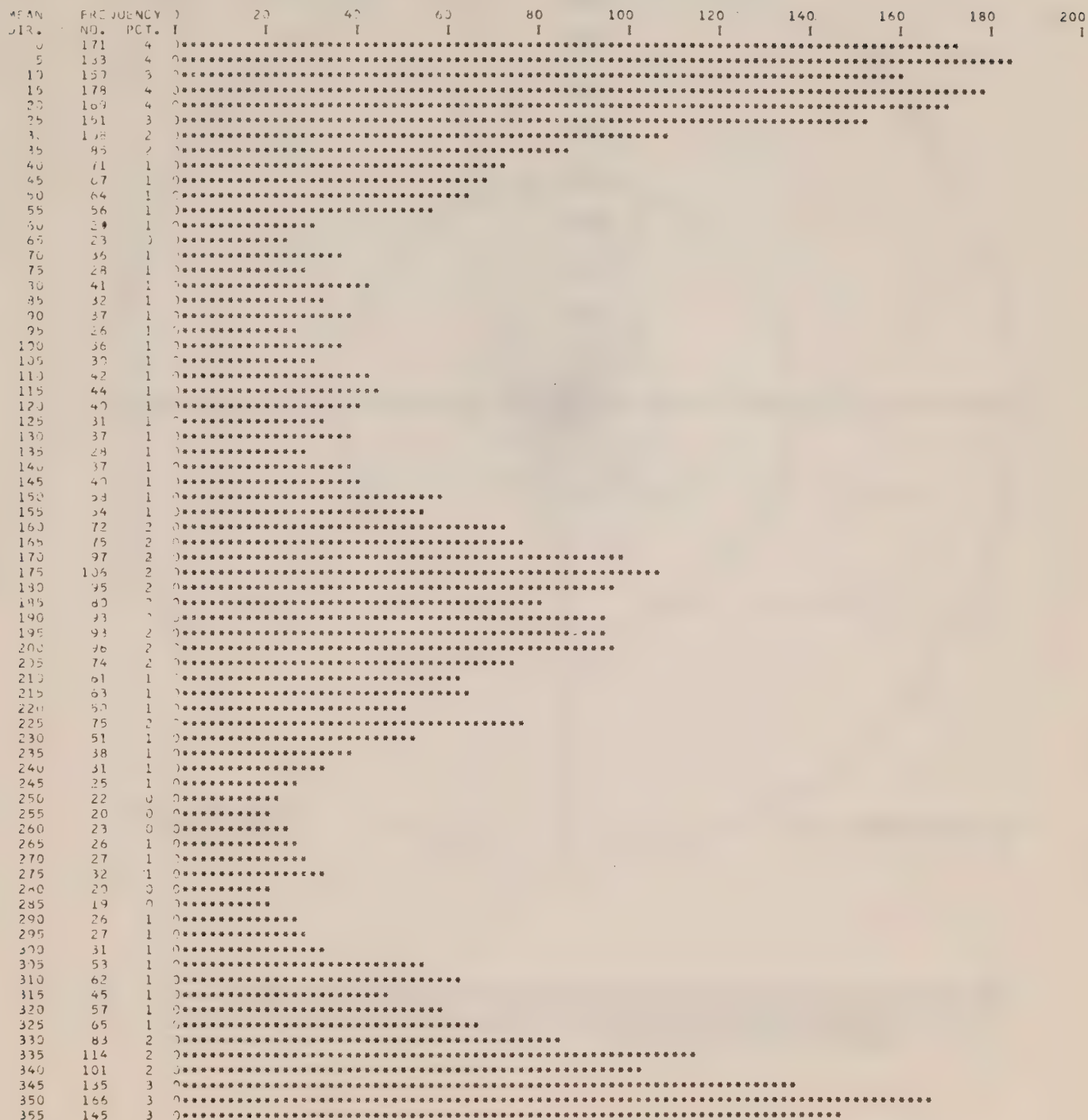
NUMBER OF OBSERVATIONS = 4765

MEAN SPEED = 80 MM/SEC

FIG. 17A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING MARCH 25 THROUGH APRIL 27, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.80 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 13. 8/25/ 3/70 TO 15. 0/27/ 4/70



NUMBER OF OBSERVATIONS = 4765

FIG. 17B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING MARCH 25 THROUGH APRIL 27, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 13. 8/25/ 3/70 TO 15.0/27/ 4/70

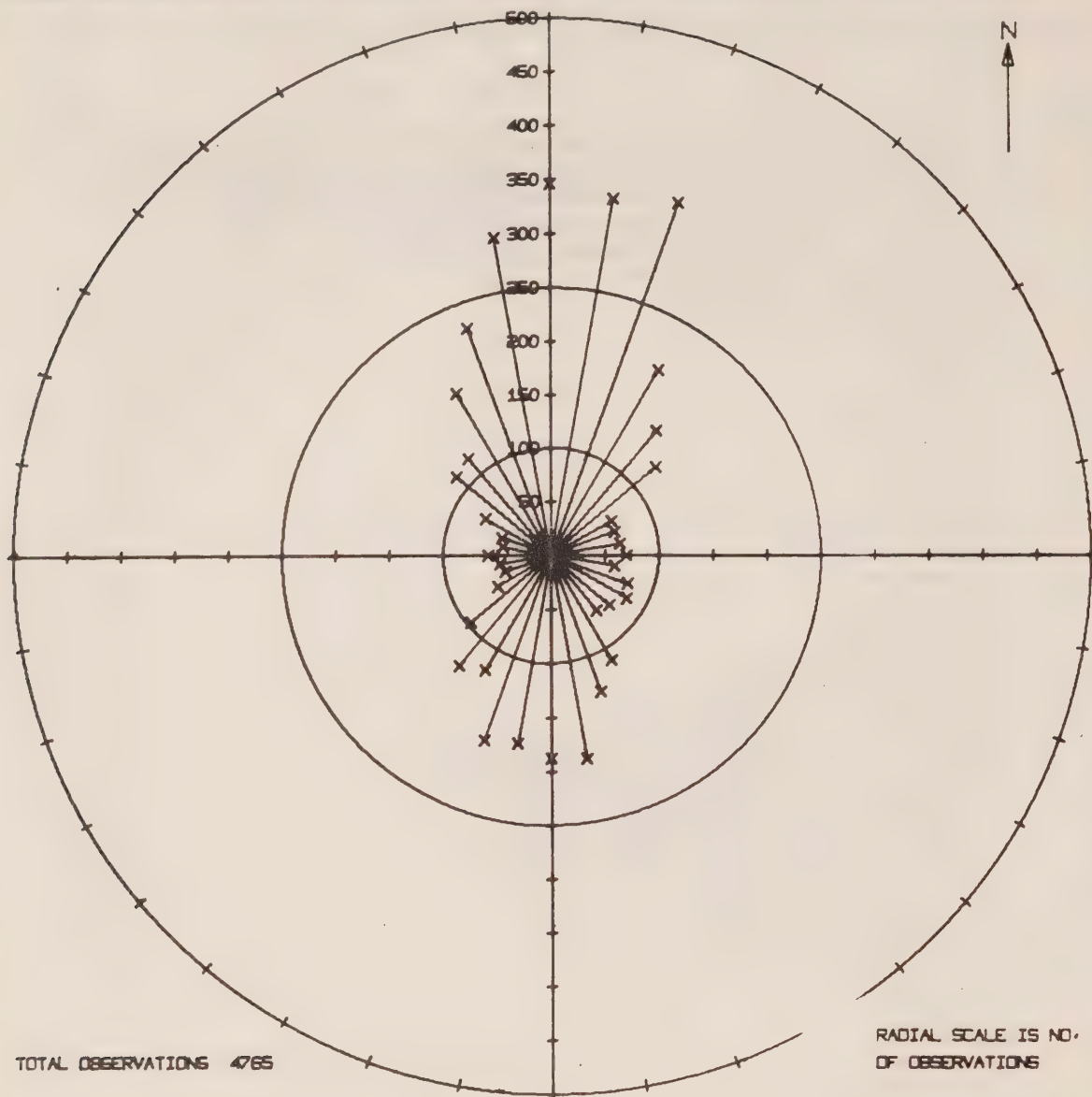


FIG. 17c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING MARCH 25 THROUGH APRIL 27, 1970.

STATION NO. M-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 13. 8/25/ 3/70 TO 15. 5/27/ 4/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	500 I	1000 I	1500 I	2000 I	2500 I	3000 I
7.00	0	0	0	0	0	0	0	0
7.05	0	0	0	0	0	0	0	0
7.10	0	0	0	0	0	0	0	0
7.15	0	0	0	0	0	0	0	0
7.20	0	0	0	0	0	0	0	0
7.25	0	0	0	0	0	0	0	0
7.30	0	0	0	0	0	0	0	0
7.35	0	0	0	0	0	0	0	0
7.40	0	0	0	0	0	0	0	0
7.45	0	0	0	0	0	0	0	0
7.50	0	0	0	0	0	0	0	0
7.55	0	0	0	0	0	0	0	0
7.60	0	0	0	0	0	0	0	0
7.65	0	0	0	0	0	0	0	0
7.70	0	0	0	0	0	0	0	0
7.75	0	0	0	0	0	0	0	0
7.80	0	0	0	0	0	0	0	0
7.85	0	0	0	0	0	0	0	0
7.90	0	0	0	0	0	0	0	0
7.95	11	0	0	0	0	0	0	0
8.00	1403	29	0	0	0	0	0	0
8.05	2773	58	0	0	0	0	0	0
8.10	478	10	0	0	0	0	0	0
8.15	57	1	0	0	0	0	0	0
8.20	42	1	0	0	0	0	0	0
8.25	1	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 8.25 = 0

NUMBER OF OBSERVATIONS = 4765

MEAN TEMP = 8.04 DEG. C.

FIG. 17D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING MARCH 25 THROUGH APRIL 27, 1970.

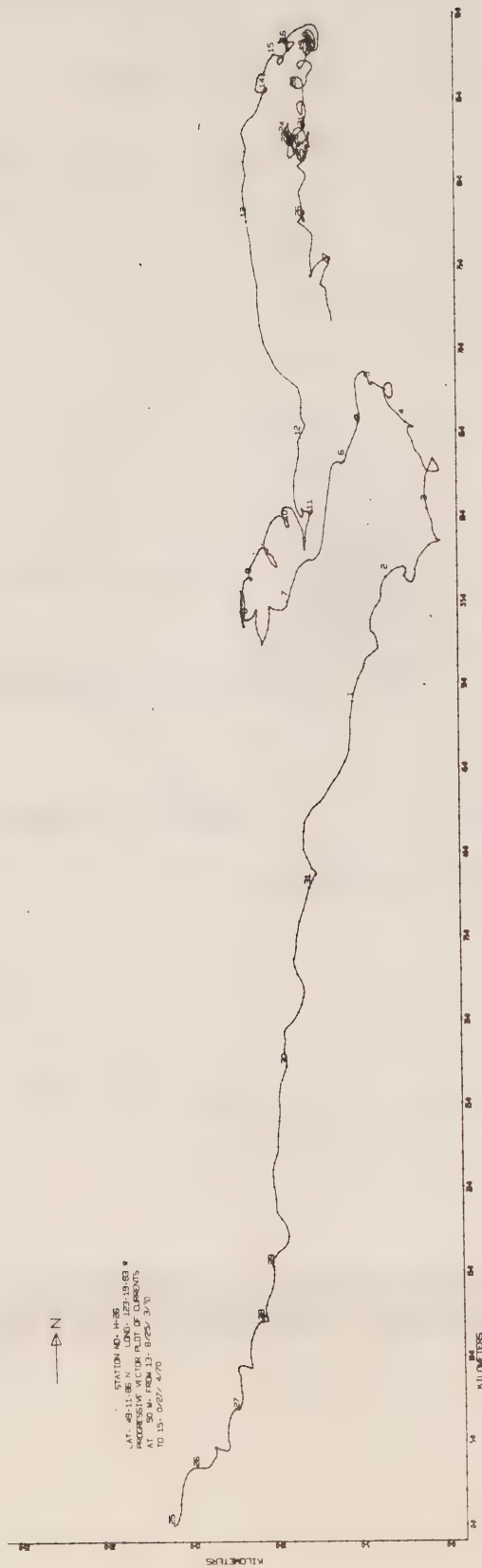


Fig. 17e.

A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 33-day period during March 25 through April 27, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 10 METERS
OBSERVATION PERIOD, FROM 8.01/19/ 477 TO 11.11/19/ 477

MEAN SPEED	FREQUENCY NO.	PCT.	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
0	0	0										
10	1	0										
20	0	0										
30	12	0										
40	117	2										
50	179	2										
60	463	6										
70	378	5										
80	786	10										
90	509	7										
100	534	7										
110	658	11										
120	541	7										
130	722	10										
140	403	5										
150	453	6										
160	260	3										
170	208	3										
180	246	3										
190	145	2										
200	17	0										
210	102	1										
220	121	2										
230	61	1										
240	68	1										
250	45	1										
260	25	0										
270	28	0										
280	12	0										
290	15	0										
300	4	0										
310	4	0										
320	7	0										
330	4	0										
340	1	0										
350	0	0										
360	1	0										
370	0	0										
380	0	0										
390	0	0										
400	0	0										
410	0	0										
420	0	0										
430	1	0										
440	1	0										
450	0	0										
460	0	0										
470	0	0										
480	0	0										
490	1	0										

NUMBER OF SPEEDS GREATER THAN 490 = 0

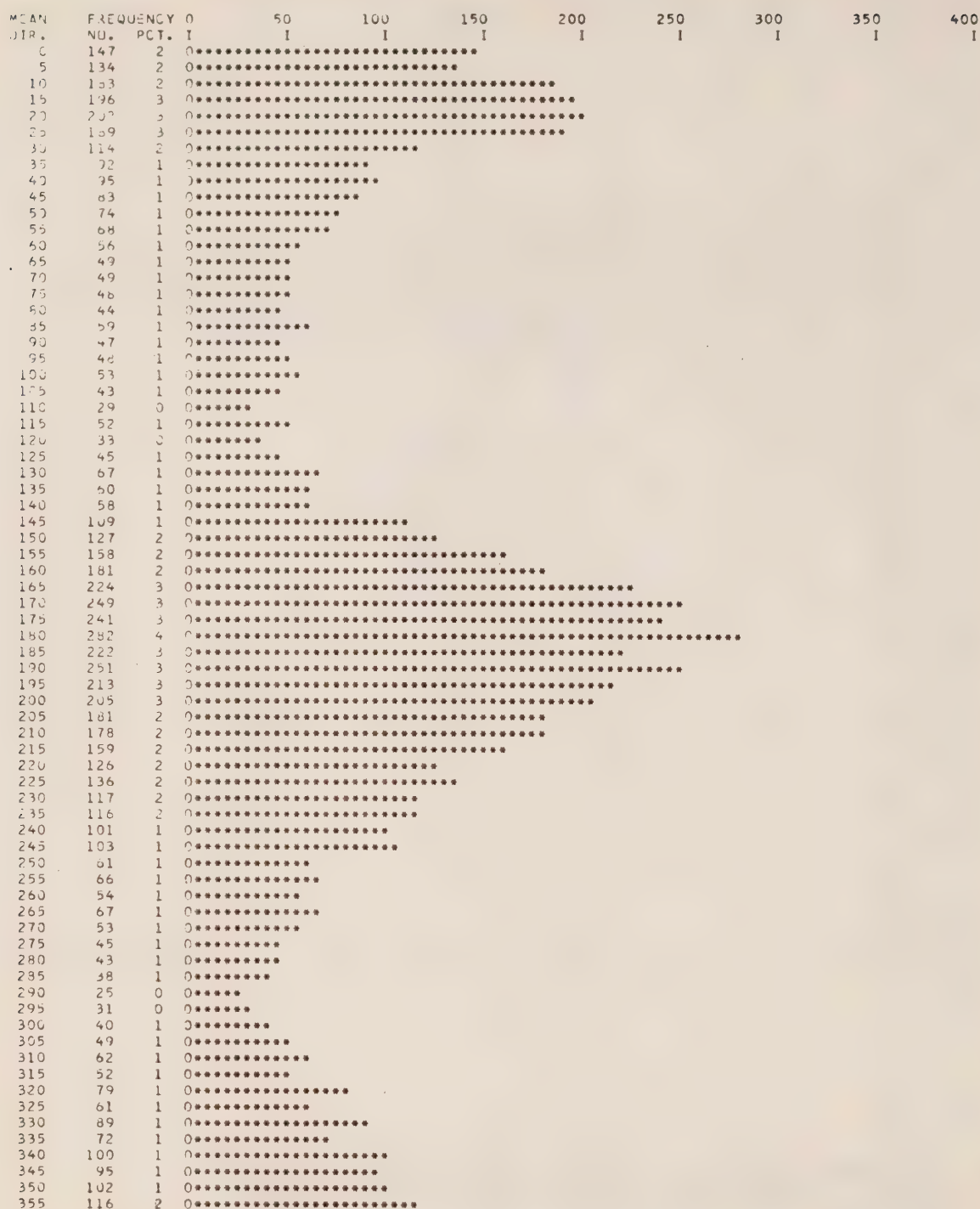
NUMBER OF OBSERVATIONS = 7496

MEAN SPEED = 121 MM/SEC

FIG. 18A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 52-DAY PERIOD DURING APRIL 28 THROUGH JUNE 19, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 8.21/28/ 4/70 TO 11.11/19/ 6/70



NUMBER OF OBSERVATIONS = 7496

FIG. 18B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 52-DAY PERIOD DURING APRIL 28 THROUGH JUNE 19, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 8.21/28/ 4/70 TO 11.11/19/ 6/70

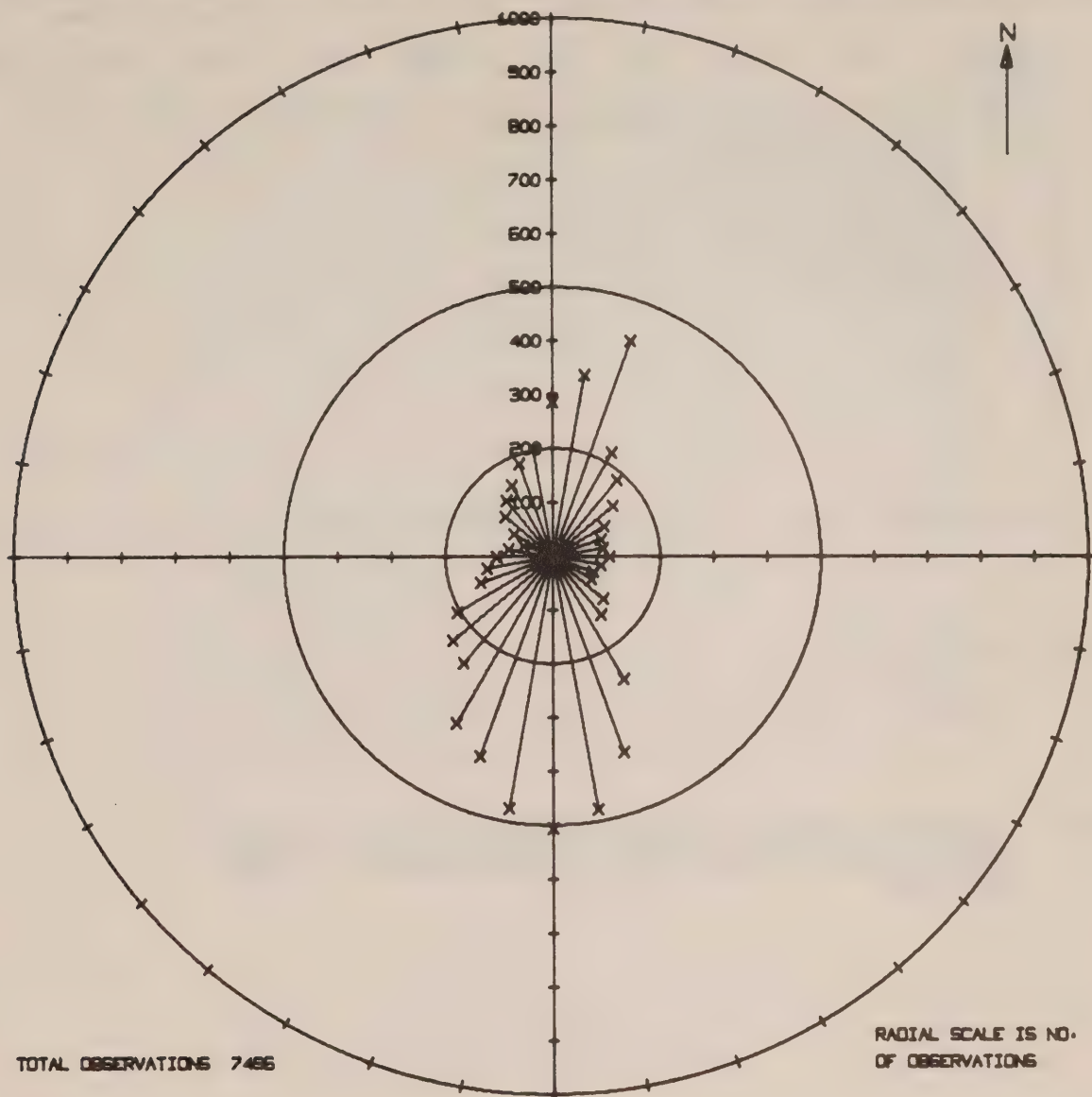
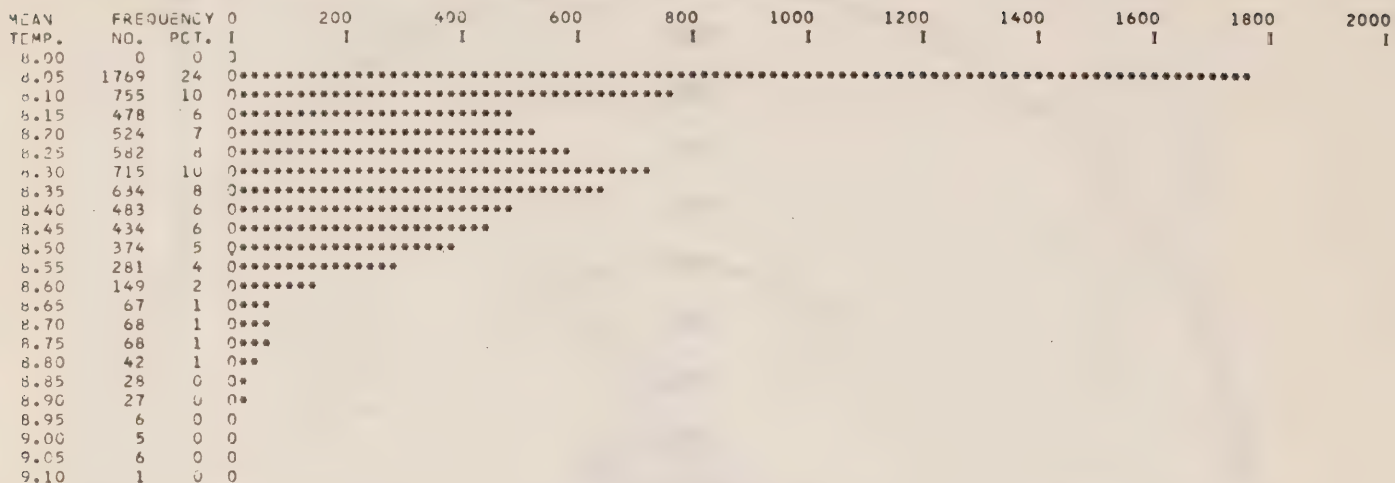


FIG. 18c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 52-DAY PERIOD DURING APRIL 28 THROUGH JUNE 19, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 8.21/28/ 4/70 TO 11.11/19/ 6/70



NUMBER OF TEMP. GREATER THAN 9.10 = 0

NUMBER OF OBSERVATIONS = 7496

MEAN TEMP = 8.26 DEG. C.

FIG. 18d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 52-DAY PERIOD DURING APRIL 28 THROUGH JUNE 19, 1970.



Fig. 18e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 52-day period during April 28 through June 19, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 13.56/19/ 6/70 TO 11. 8/28/ 7/70

MEAN SPEED	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	0	0	0										
20	1	0	0										
30	0	0	0										
40	7	0	0*										
50	21	0	0**										
60	151	3	0*****										
70	138	2	0*****										
80	352	6	0*****										
90	313	6	0*****										
100	405	7	0*****										
110	655	12	0*****										
120	412	7	0*****										
130	631	11	0*****										
140	369	7	0*****										
150	483	9	0*****										
160	256	5	0*****										
170	208	4	0*****										
180	306	5	0*****										
190	152	3	0*****										
200	234	4	0*****										
210	119	2	0*****										
220	152	3	0*****										
230	80	1	0*****										
240	54	1	0*****										
250	46	1	0*****										
260	12	0	0*										
270	15	0	0**										
280	4	0	0										
290	12	0	0*										
300	4	0	0										
310	2	0	0										
320	4	0	0										
330	1	0	0										

NUMBER OF SPEEDS GREATER THAN 330 = 0

NUMBER OF OBSERVATIONS = 5599

MEAN SPEED = 137 MM/SEC

FIG. 19A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 39-DAY PERIOD DURING JUNE 19 THROUGH JULY 28, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.85 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 13.56/17 577 TO 11. 5/23/ 7770



NUMBER OF OBSERVATIONS = 1593

FIG. 19B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 39-DAY PERIOD DURING JUNE 19 THROUGH JULY 28, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 13.56/19/ 6/70 TO 11. 8/28/ 7/70

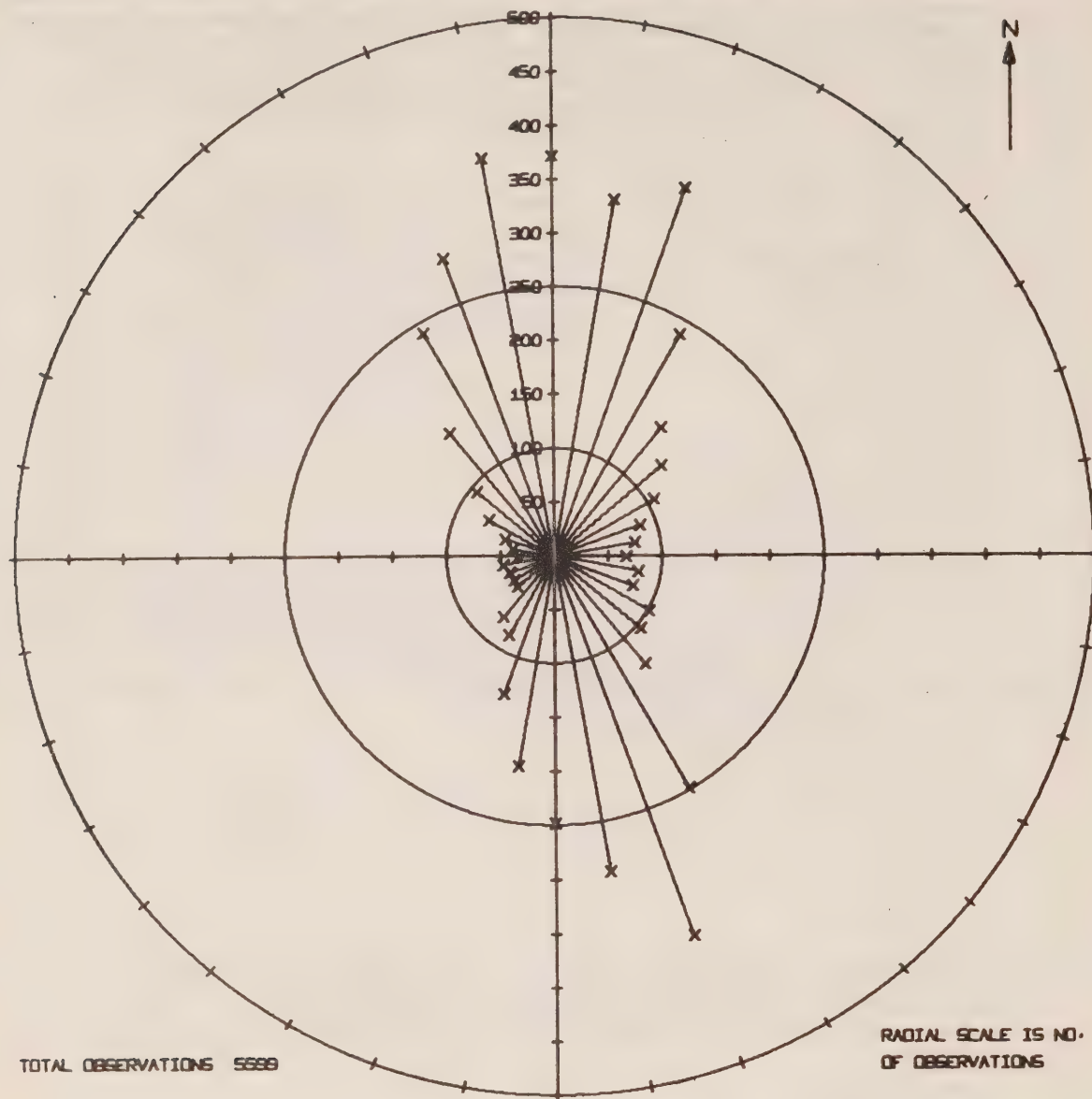
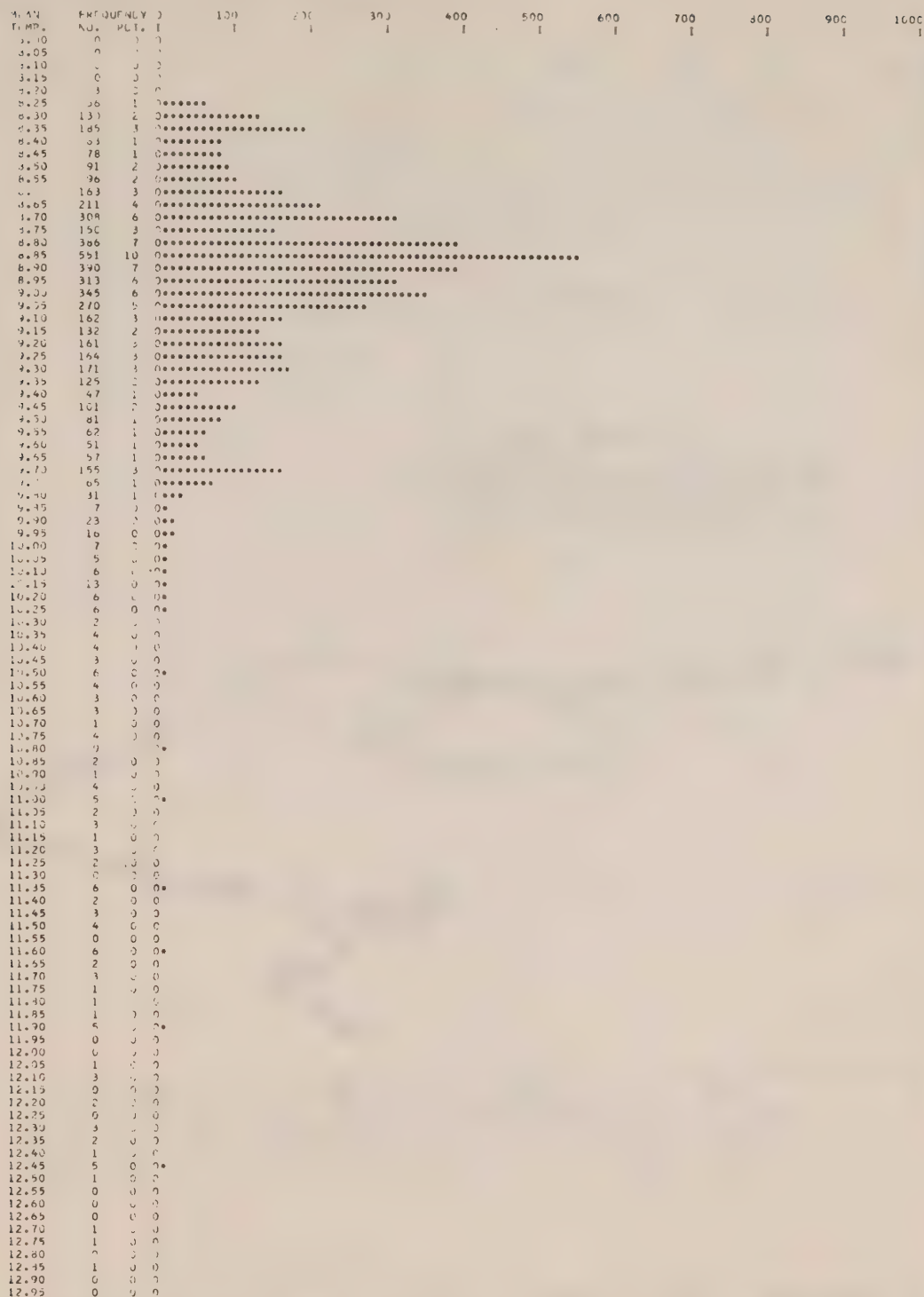


FIG. 19c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 39-DAY PERIOD DURING JUNE 19 THROUGH JULY 28, 1970.

STATION NO. H-26 LAT. 49-11.85 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. C.) AT A DEPTH OF 50 METERS
OBSERVATION PERIOD, FROM 13.56/19/ 6/70 TO 11. 8/28/ 7/70



NUMBER OF TEMP. GREATER THAN 12.95 = 15

NUMBER OF OBSERVATIONS = 5599

MEAN TEMP = 8.98 DEG. C.

FIG. 19b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 39-DAY PERIOD DURING JUNE 19 THROUGH JULY 28, 1970.

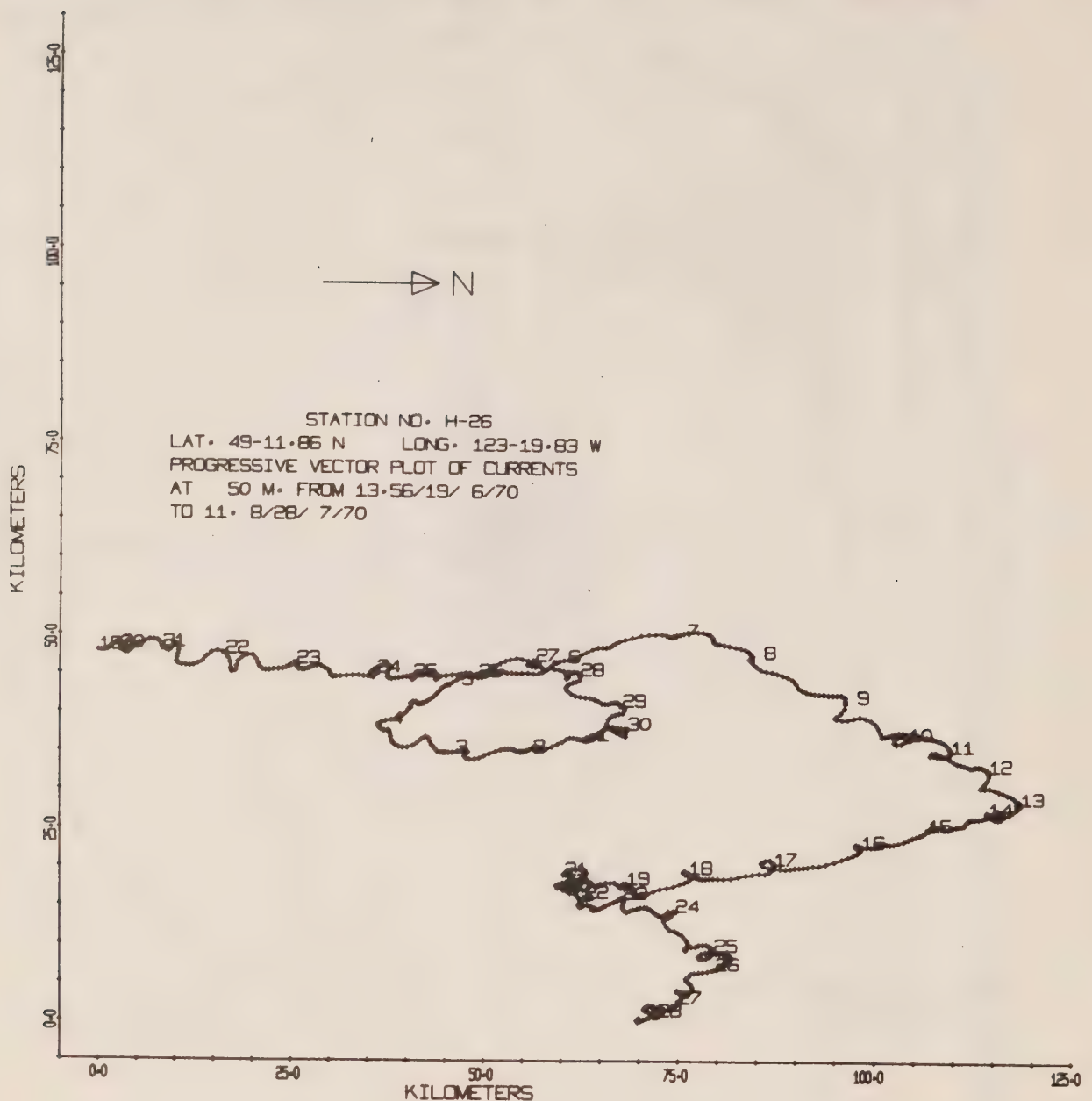


Fig. 19e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 39-day period during June 19 through July 28, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.35 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 11.25/16/ 4/69 TO 11.25/15/ 5/69

MEAN SPEED	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
0	1	0										
10	376	9	0	0	0	0	0	0	0	0	0	0
20	112	3	0	0	0	0	0	0	0	0	0	0
30	173	4	0	0	0	0	0	0	0	0	0	0
40	344	8	0	0	0	0	0	0	0	0	0	0
50	303	7	0	0	0	0	0	0	0	0	0	0
60	493	12	0	0	0	0	0	0	0	0	0	0
70	257	6	0	0	0	0	0	0	0	0	0	0
80	331	8	0	0	0	0	0	0	0	0	0	0
90	174	4	0	0	0	0	0	0	0	0	0	0
100	144	4	0	0	0	0	0	0	0	0	0	0
110	211	5	0	0	0	0	0	0	0	0	0	0
120	144	3	0	0	0	0	0	0	0	0	0	0
130	187	4	0	0	0	0	0	0	0	0	0	0
140	106	3	0	0	0	0	0	0	0	0	0	0
150	147	3	0	0	0	0	0	0	0	0	0	0
160	109	3	0	0	0	0	0	0	0	0	0	0
170	102	2	0	0	0	0	0	0	0	0	0	0
180	121	3	0	0	0	0	0	0	0	0	0	0
190	67	1	0	0	0	0	0	0	0	0	0	0
200	33	2	0	0	0	0	0	0	0	0	0	0
210	55	1	0	0	0	0	0	0	0	0	0	0
220	46	1	0	0	0	0	0	0	0	0	0	0
230	35	1	0	0	0	0	0	0	0	0	0	0
240	25	1	0	0	0	0	0	0	0	0	0	0
250	35	1	0	0	0	0	0	0	0	0	0	0
260	13	0	0	0	0	0	0	0	0	0	0	0
270	16	0	0	0	0	0	0	0	0	0	0	0
280	9	0	0	0	0	0	0	0	0	0	0	0
290	18	0	0	0	0	0	0	0	0	0	0	0
300	6	0	0	0	0	0	0	0	0	0	0	0
310	4	0	0	0	0	0	0	0	0	0	0	0
320	3	0	0	0	0	0	0	0	0	0	0	0
330	5	0	0	0	0	0	0	0	0	0	0	0
340	4	0	0	0	0	0	0	0	0	0	0	0
350	3	0	0	0	0	0	0	0	0	0	0	0
360	0	0	0	0	0	0	0	0	0	0	0	0
370	0	0	0	0	0	0	0	0	0	0	0	0
380	0	0	0	0	0	0	0	0	0	0	0	0
390	0	0	0	0	0	0	0	0	0	0	0	0
400	0	0	0	0	0	0	0	0	0	0	0	0
410	0	0	0	0	0	0	0	0	0	0	0	0
420	0	0	0	0	0	0	0	0	0	0	0	0
430	0	0	0	0	0	0	0	0	0	0	0	0
440	0	0	0	0	0	0	0	0	0	0	0	0
450	1	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 450 = 0

NUMBER OF OBSERVATIONS = 4177

MEAN SPEED = 94 MM/SEC

FIG. 20A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 11.25/16/ 4/69 TO 11.25/15/ 5/69

MEAN DIR.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400
0	202	5	0	0	0	0	0	0	0	0	0
5	245	6	0	0	0	0	0	0	0	0	0
10	192	5	0	0	0	0	0	0	0	0	0
15	231	6	0	0	0	0	0	0	0	0	0
20	256	7	0	0	0	0	0	0	0	0	0
25	152	4	0	0	0	0	0	0	0	0	0
30	119	3	0	0	0	0	0	0	0	0	0
35	112	3	0	0	0	0	0	0	0	0	0
40	84	2	0	0	0	0	0	0	0	0	0
45	70	2	0	0	0	0	0	0	0	0	0
50	46	1	0	0	0	0	0	0	0	0	0
55	42	1	0	0	0	0	0	0	0	0	0
60	43	1	0	0	0	0	0	0	0	0	0
65	47	1	0	0	0	0	0	0	0	0	0
70	42	1	0	0	0	0	0	0	0	0	0
75	31	1	0	0	0	0	0	0	0	0	0
80	27	1	0	0	0	0	0	0	0	0	0
85	39	1	0	0	0	0	0	0	0	0	0
90	32	1	0	0	0	0	0	0	0	0	0
95	22	1	0	0	0	0	0	0	0	0	0
100	21	1	0	0	0	0	0	0	0	0	0
105	20	0	0	0	0	0	0	0	0	0	0
110	14	0	0	0	0	0	0	0	0	0	0
115	17	0	0	0	0	0	0	0	0	0	0
120	17	0	0	0	0	0	0	0	0	0	0
125	30	1	0	0	0	0	0	0	0	0	0
130	36	1	0	0	0	0	0	0	0	0	0
135	39	1	0	0	0	0	0	0	0	0	0
140	35	1	0	0	0	0	0	0	0	0	0
145	38	1	0	0	0	0	0	0	0	0	0
150	33	1	0	0	0	0	0	0	0	0	0
155	33	1	0	0	0	0	0	0	0	0	0
160	30	1	0	0	0	0	0	0	0	0	0
165	31	1	0	0	0	0	0	0	0	0	0
170	37	1	0	0	0	0	0	0	0	0	0
175	69	2	0	0	0	0	0	0	0	0	0
180	88	2	0	0	0	0	0	0	0	0	0
185	70	2	0	0	0	0	0	0	0	0	0
190	49	1	0	0	0	0	0	0	0	0	0
195	45	1	0	0	0	0	0	0	0	0	0
200	61	1	0	0	0	0	0	0	0	0	0
205	74	2	0	0	0	0	0	0	0	0	0
210	52	1	0	0	0	0	0	0	0	0	0
215	28	1	0	0	0	0	0	0	0	0	0
220	21	1	0	0	0	0	0	0	0	0	0
225	19	0	0	0	0	0	0	0	0	0	0
230	27	1	0	0	0	0	0	0	0	0	0
235	17	0	0	0	0	0	0	0	0	0	0
240	17	0	0	0	0	0	0	0	0	0	0
245	21	1	0	0	0	0	0	0	0	0	0
250	16	0	0	0	0	0	0	0	0	0	0
255	26	1	0	0	0	0	0	0	0	0	0
260	22	1	0	0	0	0	0	0	0	0	0
265	32	1	0	0	0	0	0	0	0	0	0
270	21	1	0	0	0	0	0	0	0	0	0
275	15	0	0	0	0	0	0	0	0	0	0
280	26	1	0	0	0	0	0	0	0	0	0
285	20	0	0	0	0	0	0	0	0	0	0
290	32	1	0	0	0	0	0	0	0	0	0
295	21	1	0	0	0	0	0	0	0	0	0
300	27	1	0	0	0	0	0	0	0	0	0
305	18	0	0	0	0	0	0	0	0	0	0
310	19	0	0	0	0	0	0	0	0	0	0
315	31	1	0	0	0	0	0	0	0	0	0
320	35	1	0	0	0	0	0	0	0	0	0
325	31	1	0	0	0	0	0	0	0	0	0
330	34	1	0	0	0	0	0	0	0	0	0
335	62	1	0	0	0	0	0	0	0	0	0
340	84	2	0	0	0	0	0	0	0	0	0
345	97	2	0	0	0	0	0	0	0	0	0
350	179	4	0	0	0	0	0	0	0	0	0
355	204	5	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 4177

FIG. 20b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 11.25/16/ 4/69 TO 11.25/15/ 5/69

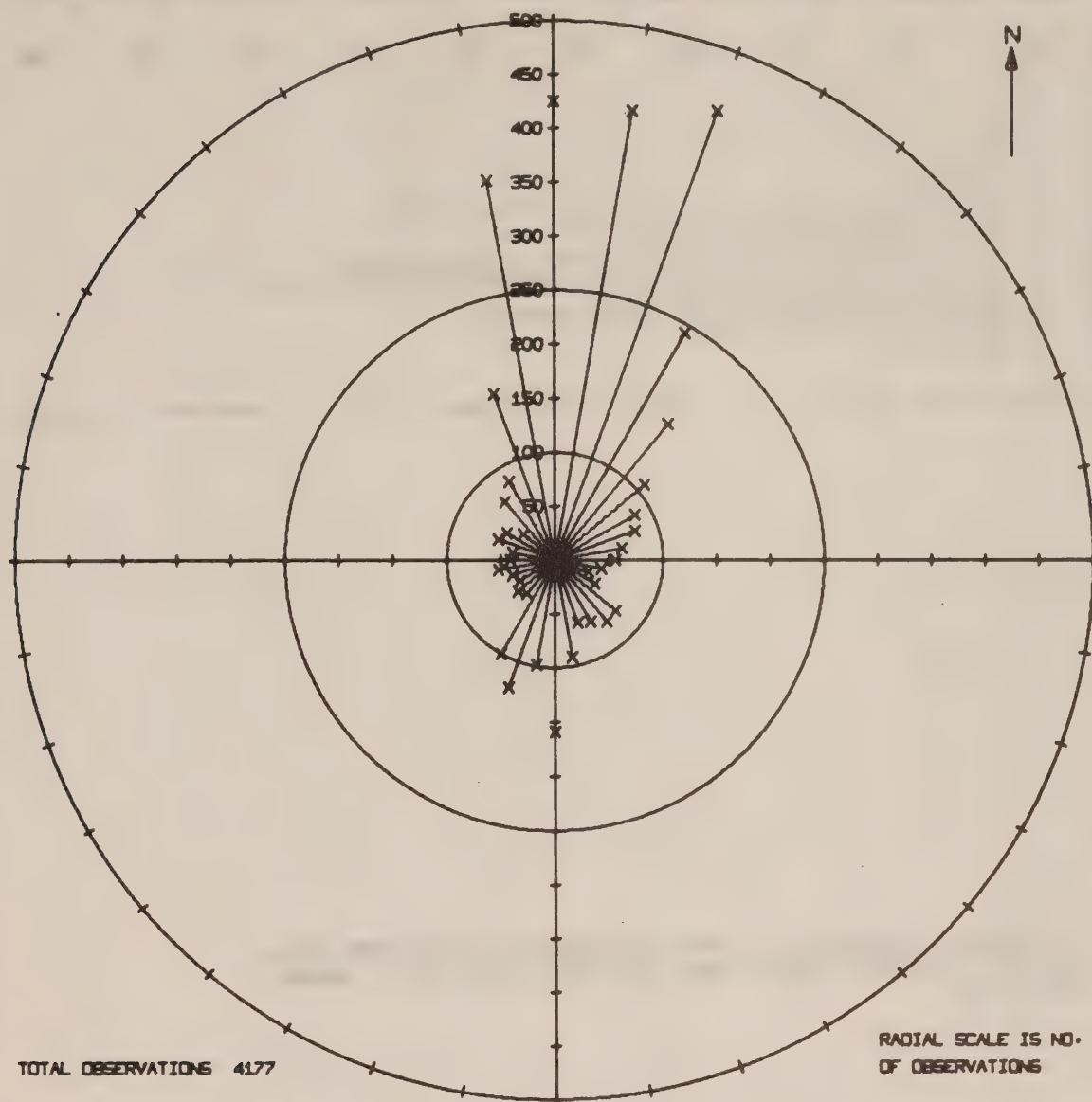


FIG. 20c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

STATION NO. M-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 11.25/16/ 4/69 TO 11.25/15/ 5/69

MEAN TEMP.	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700	800	900	1000
7.00	3	0	0	1	1	1	1	1	1	1	1	1	1
7.05	3	0	0										
7.10	0	0	0										
7.15	8	0	0*										
7.20	12	0	0*										
7.25	81	2	0*****										
7.30	119	3	0*****										
7.35	571	14	0*****										
7.40	399	10	0*****										
7.45	366	9	0*****										
7.50	621	15	0*****										
7.55	666	16	0*****										
7.60	392	9	0*****										
7.65	504	12	0*****										
7.70	298	7	0*****										
7.75	114	3	0*****										
7.80	6	0	0*										

NUMBER OF TEMP. GREATER THAN 7.80 = 0 NUMBER OF OBSERVATIONS = 4177 MEAN TEMP = 7.51 DEG. C.

FIG. 20b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 29-DAY PERIOD DURING APRIL 16 THROUGH MAY 15, 1969.

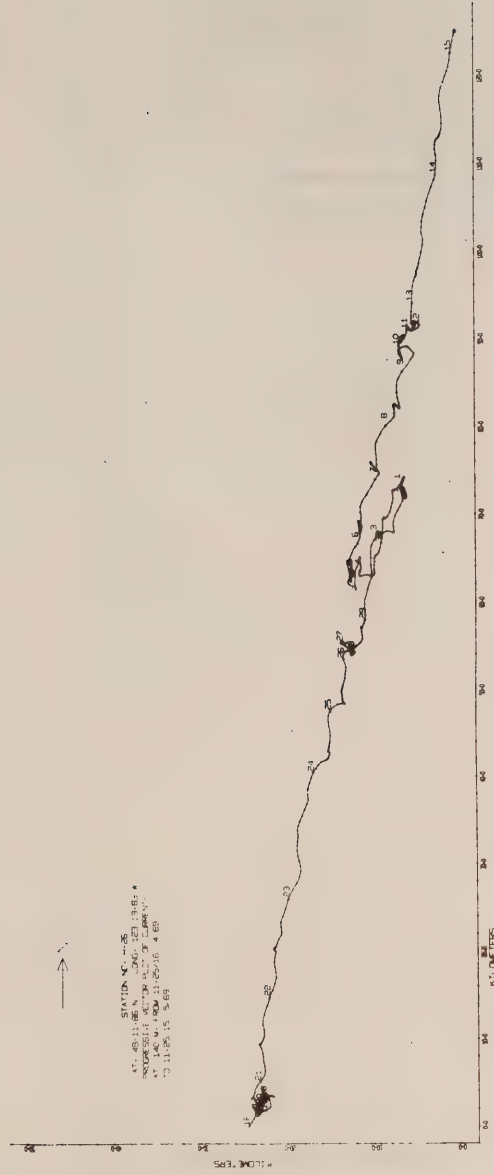


Fig. 20e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 29-day period during April 16 through May 15, 1969. The spatial scale corresponds to the displacement of the water that would occur if the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.85 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 13.25/15/ 5/69 TO 22.15/15/ 6/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450
			I	I	I	I	I	I	I	I	I	I
0	0	0	0									
10	218	5	0	*****								
20	101	2	0	*****								
30	146	3	0	*****								
40	294	7	0	*****								
50	249	6	0	*****								
60	389	9	0	*****								
70	199	4	0	*****								
80	297	7	0	*****								
90	193	4	0	*****								
100	215	5	0	*****								
110	269	6	0	*****								
120	186	4	0	*****								
130	234	5	0	*****								
140	158	3	0	*****								
150	239	5	0	*****								
160	125	3	0	*****								
170	80	2	0	*****								
180	156	3	0	*****								
190	90	2	0	*****								
200	102	2	0	*****								
210	63	1	0	*****								
220	80	2	0	*****								
230	55	1	0	*****								
240	36	1	0	*****								
250	77	2	0	*****								
260	26	1	0	*****								
270	47	1	0	*****								
280	23	1	0	*****								
290	23	1	0	*****								
300	20	0	0	****								
310	11	0	0	***								
320	17	0	0	***								
330	13	0	0	***								
340	25	1	0	*****								
350	11	0	0	***								
360	19	0	0	***								
370	7	0	0	**								
380	5	0	0	*								
390	11	0	0	***								
400	5	0	0	*								
410	5	0	0	*								
420	0	0	0									
430	0	0	0									
440	0	0	0									
450	0	0	0									
460	1	0	0									
470	0	0	0									
480	0	0	0									
490	0	0	0									
500	0	0	0									
510	0	0	0									
520	0	0	0									
530	0	0	0									
540	0	0	0									
550	0	0	0									
560	0	0	0									
570	0	0	0									
580	0	0	0									
590	0	0	0									
600	0	0	0									
610	0	0	0									
620	0	0	0									
630	1	0	0									

NUMBER OF SPEEDS GREATER THAN 630 = 0

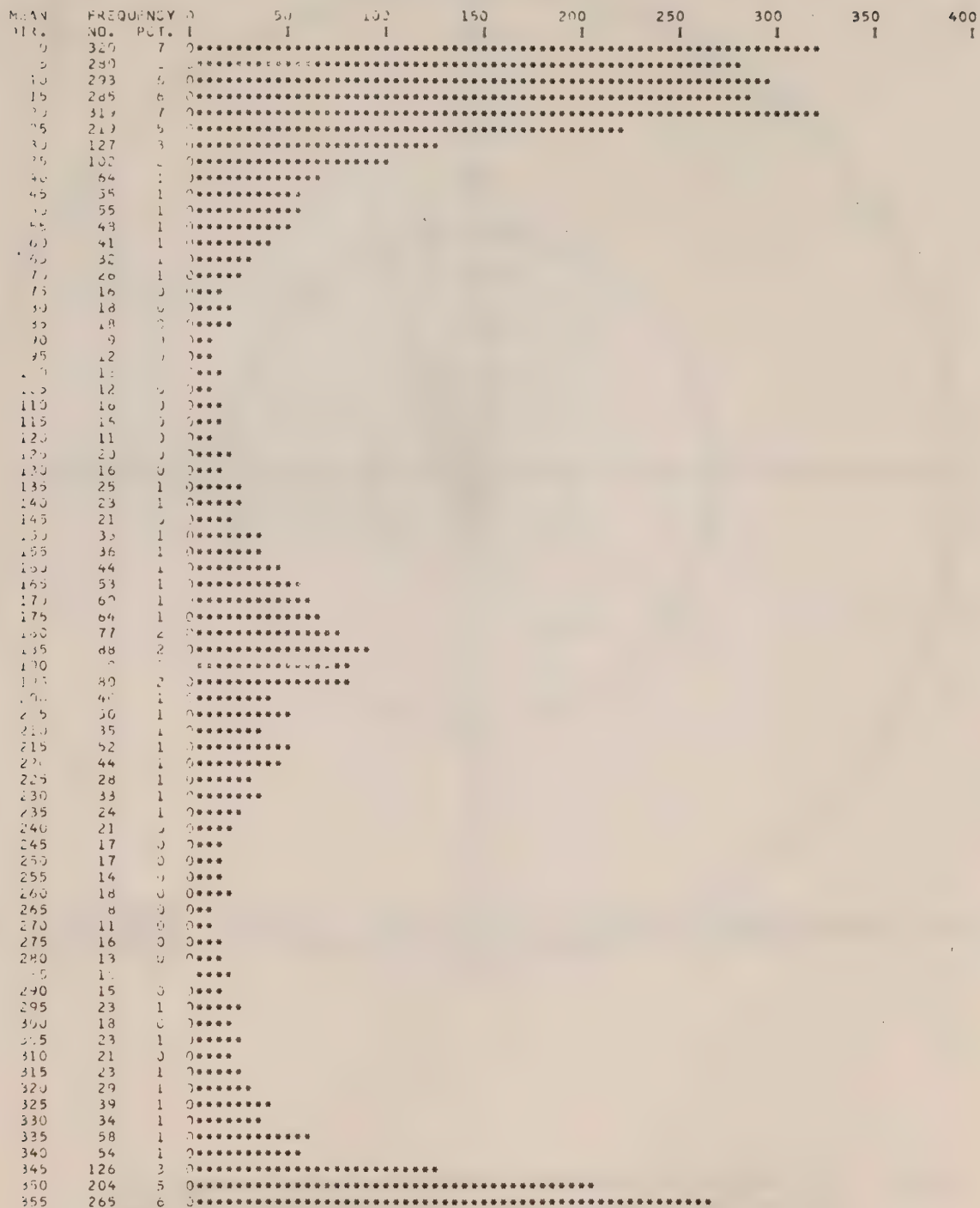
NUMBER OF OBSERVATIONS = 4518

MEAN SPEED = 116 MM/SEC

FIG. 21A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 31-DAY PERIOD DURING MAY 15 THROUGH JUNE 15, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.95 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 13.25/15/ 5/69 TO 22.15/15/ 6/69



NUMBER OF OBSERVATIONS = 4518

FIG. 21b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 31-DAY PERIOD DURING MAY 15 THROUGH JUNE 15, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 13.25/15/ 5/69 TO 22.15/15/ 6/69

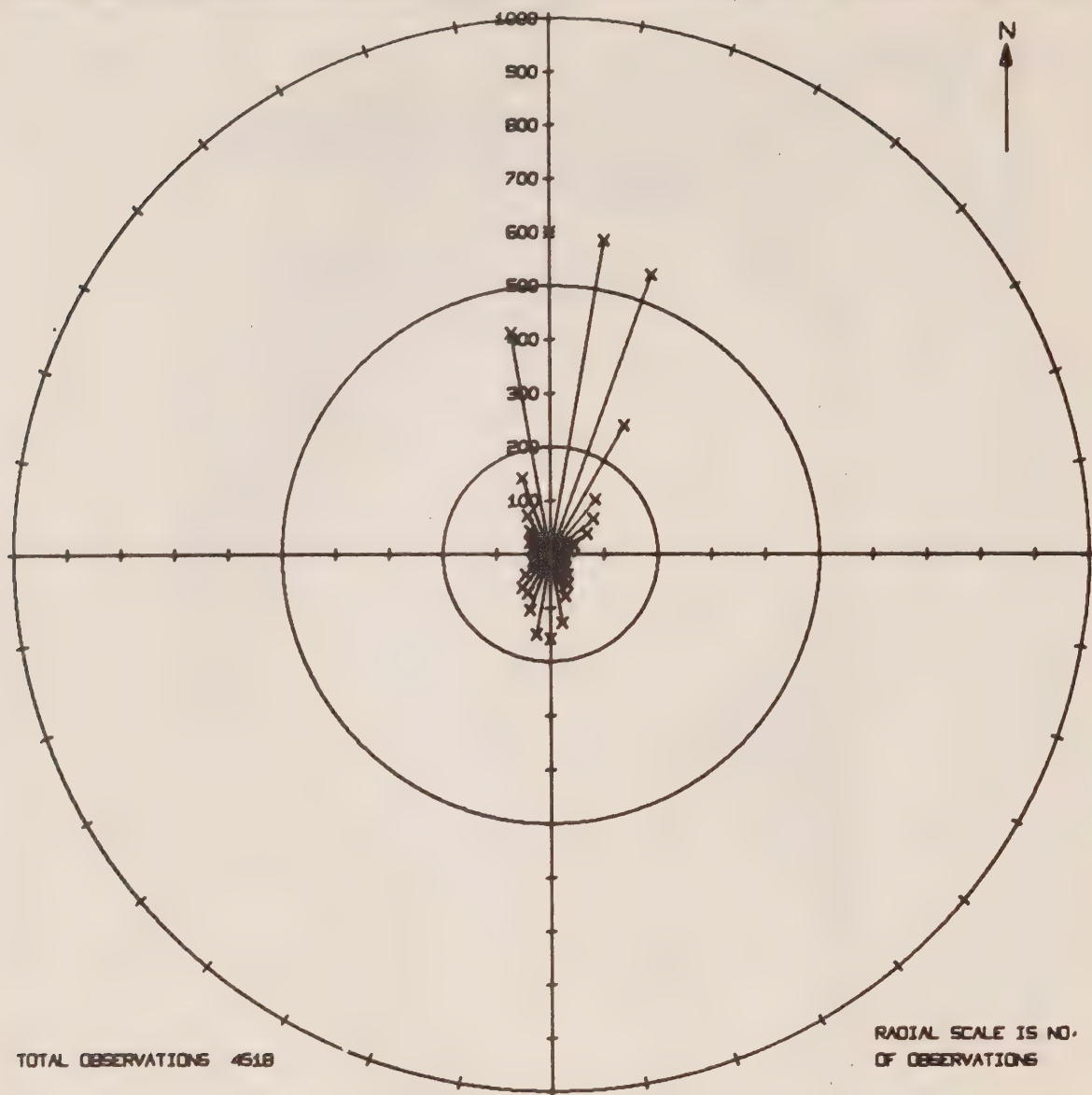


FIG. 21c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 31-DAY PERIOD DURING MAY 15 THROUGH JUNE 15, 1969.

STATION NO. H-26 LAT. 49-11.85 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 13.25/15/ 5/69 TO 22.15/15/ 6/69

TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
7.00	0	0	0	0	0	0	0	0	0	0	0	0
7.05	0	0	0	0	0	0	0	0	0	0	0	0
7.10	0	0	0	0	0	0	0	0	0	0	0	0
7.15	0	0	0	0	0	0	0	0	0	0	0	0
7.20	0	0	0	0	0	0	0	0	0	0	0	0
7.25	0	0	0	0	0	0	0	0	0	0	0	0
7.30	0	0	0	0	0	0	0	0	0	0	0	0
7.35	0	0	0	0	0	0	0	0	0	0	0	0
7.40	0	0	0	0	0	0	0	0	0	0	0	0
7.45	8	0	0	0	0	0	0	0	0	0	0	0
7.50	16	0	0	0	0	0	0	0	0	0	0	0
7.55	17	0	0	0	0	0	0	0	0	0	0	0
7.60	23	1	0	0	0	0	0	0	0	0	0	0
7.65	80	2	0	0	0	0	0	0	0	0	0	0
7.70	219	5	0	0	0	0	0	0	0	0	0	0
7.75	118	3	0	0	0	0	0	0	0	0	0	0
7.80	135	3	0	0	0	0	0	0	0	0	0	0
7.85	75	2	0	0	0	0	0	0	0	0	0	0
7.90	93	2	0	0	0	0	0	0	0	0	0	0
7.95	96	2	0	0	0	0	0	0	0	0	0	0
8.00	118	3	0	0	0	0	0	0	0	0	0	0
8.05	147	3	0	0	0	0	0	0	0	0	0	0
8.10	262	6	0	0	0	0	0	0	0	0	0	0
8.15	349	8	0	0	0	0	0	0	0	0	0	0
8.20	145	3	0	0	0	0	0	0	0	0	0	0
8.25	409	9	0	0	0	0	0	0	0	0	0	0
8.30	253	6	0	0	0	0	0	0	0	0	0	0
8.35	392	9	0	0	0	0	0	0	0	0	0	0
8.40	441	10	0	0	0	0	0	0	0	0	0	0
8.45	493	11	0	0	0	0	0	0	0	0	0	0
8.50	514	11	0	0	0	0	0	0	0	0	0	0
8.55	86	2	0	0	0	0	0	0	0	0	0	0
8.60	25	1	0	0	0	0	0	0	0	0	0	0
8.65	11	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 8.6° = 0

NUMBER OF OBSERVATIONS = 4518

MEAN TEMP = 8.21 DEG. C.

FIG. 21d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 31-DAY PERIOD DURING MAY 15 THROUGH JUNE 15, 1969.

STATION NO. H-26 LAT. 49-11.35 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 14.14/12/ 6/69 TO 13.31/10/ 7/69

SPEED	FREQUENCY NO.	PCT. I	0	50	100	150	200	250	300	350
			I	I	I	I	I	I	I	I
10	252	8	0	*****						
20	115	4	0	*****						
30	187	6	0	*****						
40	325	10	0	*****						
50	183	6	0	*****						
60	265	9	0	*****						
70	154	5	0	*****						
80	230	7	0	*****						
90	181	6	0	*****						
100	133	4	0	*****						
110	155	5	0	*****						
120	118	4	0	*****						
130	130	6	0	*****						
140	118	4	0	*****						
150	115	4	0	*****						
160	69	2	0	*****						
170	53	2	0	*****						
180	73	2	0	*****						
190	36	1	0	*****						
200	36	1	0	*****						
210	16	1	0	***						
220	32	1	0	*****						
230	14	0	0	***						
240	21	1	0	****						
250	21	1	0	****						
260	3	0	0	*						
270	13	0	0	***						
280	15	0	0	***						
290	9	0	0	**						
300	4	0	0	*						
310	5	0	0	*						
320	7	0	0	*						
330	4	0	0	*						
340	2	0	0							
350	0	0	0							
360	3	0	0	*						
370	3	0	0	*						
380	2	0	0							

NUMBER OF SPEEDS GREATER THAN 380 = 0 NUMBER OF OBSERVATIONS = 3163

MEAN SPEED = 90 MM/SEC

FIG. 22A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 14.13/18/ 5/69 TO 13.31/10/ 7/69

MEAN DIR.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400
0	234	7	0	0	0	0	0	0	0	0	0
5	174	6	0	0	0	0	0	0	0	0	0
10	205	6	0	0	0	0	0	0	0	0	0
15	214	7	0	0	0	0	0	0	0	0	0
20	164	5	0	0	0	0	0	0	0	0	0
25	96	3	0	0	0	0	0	0	0	0	0
30	39	1	0	0	0	0	0	0	0	0	0
35	53	2	0	0	0	0	0	0	0	0	0
40	53	2	0	0	0	0	0	0	0	0	0
45	31	1	0	0	0	0	0	0	0	0	0
50	42	1	0	0	0	0	0	0	0	0	0
55	23	1	0	0	0	0	0	0	0	0	0
60	16	1	0	0	0	0	0	0	0	0	0
65	21	1	0	0	0	0	0	0	0	0	0
70	6	0	0	0	0	0	0	0	0	0	0
75	11	0	0	0	0	0	0	0	0	0	0
80	13	0	0	0	0	0	0	0	0	0	0
85	6	0	0	0	0	0	0	0	0	0	0
90	15	0	0	0	0	0	0	0	0	0	0
95	15	0	0	0	0	0	0	0	0	0	0
100	11	0	0	0	0	0	0	0	0	0	0
105	16	1	0	0	0	0	0	0	0	0	0
110	13	0	0	0	0	0	0	0	0	0	0
115	8	0	0	0	0	0	0	0	0	0	0
120	10	0	0	0	0	0	0	0	0	0	0
125	20	1	0	0	0	0	0	0	0	0	0
130	22	1	0	0	0	0	0	0	0	0	0
135	14	0	0	0	0	0	0	0	0	0	0
140	16	1	0	0	0	0	0	0	0	0	0
145	18	1	0	0	0	0	0	0	0	0	0
150	22	1	0	0	0	0	0	0	0	0	0
155	29	1	0	0	0	0	0	0	0	0	0
160	43	1	0	0	0	0	0	0	0	0	0
165	31	1	0	0	0	0	0	0	0	0	0
170	40	1	0	0	0	0	0	0	0	0	0
175	50	2	0	0	0	0	0	0	0	0	0
180	54	2	0	0	0	0	0	0	0	0	0
185	59	2	0	0	0	0	0	0	0	0	0
190	58	2	0	0	0	0	0	0	0	0	0
195	53	2	0	0	0	0	0	0	0	0	0
200	56	2	0	0	0	0	0	0	0	0	0
205	61	2	0	0	0	0	0	0	0	0	0
210	48	2	0	0	0	0	0	0	0	0	0
215	33	1	0	0	0	0	0	0	0	0	0
220	22	1	0	0	0	0	0	0	0	0	0
225	11	0	0	0	0	0	0	0	0	0	0
230	14	0	0	0	0	0	0	0	0	0	0
235	13	0	0	0	0	0	0	0	0	0	0
240	9	0	0	0	0	0	0	0	0	0	0
245	11	0	0	0	0	0	0	0	0	0	0
250	16	1	0	0	0	0	0	0	0	0	0
255	13	0	0	0	0	0	0	0	0	0	0
260	14	0	0	0	0	0	0	0	0	0	0
265	35	1	0	0	0	0	0	0	0	0	0
270	20	1	0	0	0	0	0	0	0	0	0
275	20	1	0	0	0	0	0	0	0	0	0
280	21	1	0	0	0	0	0	0	0	0	0
285	17	1	0	0	0	0	0	0	0	0	0
290	10	0	0	0	0	0	0	0	0	0	0
295	11	0	0	0	0	0	0	0	0	0	0
300	14	0	0	0	0	0	0	0	0	0	0
305	19	1	0	0	0	0	0	0	0	0	0
310	27	1	0	0	0	0	0	0	0	0	0
315	22	1	0	0	0	0	0	0	0	0	0
320	31	1	0	0	0	0	0	0	0	0	0
325	30	1	0	0	0	0	0	0	0	0	0
330	70	2	0	0	0	0	0	0	0	0	0
335	68	2	0	0	0	0	0	0	0	0	0
340	58	2	0	0	0	0	0	0	0	0	0
345	92	3	0	0	0	0	0	0	0	0	0
350	119	4	0	0	0	0	0	0	0	0	0
355	140	4	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 3163

FIG. 22B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 14.13/18/ 6/69 TO 13.31/10/ 7/69

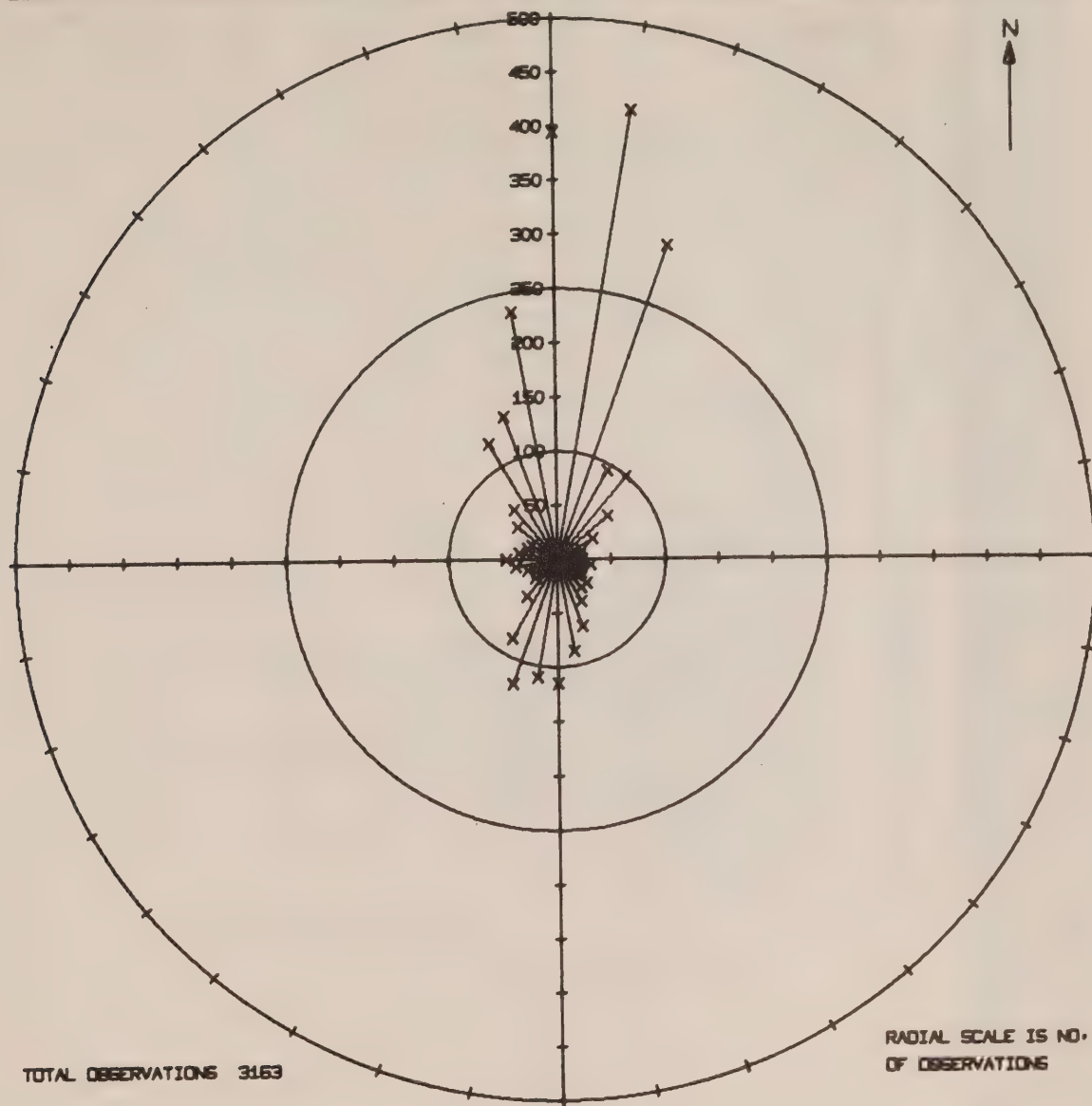


FIG. 22c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 14.13/19/ 6/69 TO 13.31/10/ 7/69

MEAN TEMP.	FREQUENCY NO.	PLT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I
7.00	0	0							
7.05	0	0							
7.10	0	0							
7.15	0	0							
7.20	0	0							
7.25	0	0							
7.30	0	0							
7.35	0	0							
7.40	0	0							
7.45	0	0							
7.50	0	0							
7.55	0	0							
7.60	0	0							
7.65	0	0							
7.70	0	0							
7.75	0	0							
7.80	0	0							
7.85	0	0							
7.90	0	0							
7.95	51	2							
8.00	36	1							
8.05	14	0							
8.10	8	0							
8.15	17	1							
8.20	12	0							
8.25	75	2							
8.30	55	2							
8.35	87	3							
8.40	78	2							
8.45	95	3							
8.50	85	3							
8.55	110	3							
8.60	172	5							
8.65	236	7							
8.70	173	5							
8.75	241	8							
8.80	185	6							
8.85	152	5							
8.90	306	10							
8.95	265	8							
9.00	151	5							
9.05	198	6							
9.10	92	3							
9.15	64	2							
9.20	40	1							
9.25	114	4							
9.30	49	2							

NUMBER OF TEMP. GREATER THAN 9.30 = 0

NUMBER OF OBSERVATIONS = 3163

MEAN TEMP = 8.76 DEG. C.

FIG. 22b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 22-DAY PERIOD DURING JUNE 18 THROUGH JULY 10, 1969.

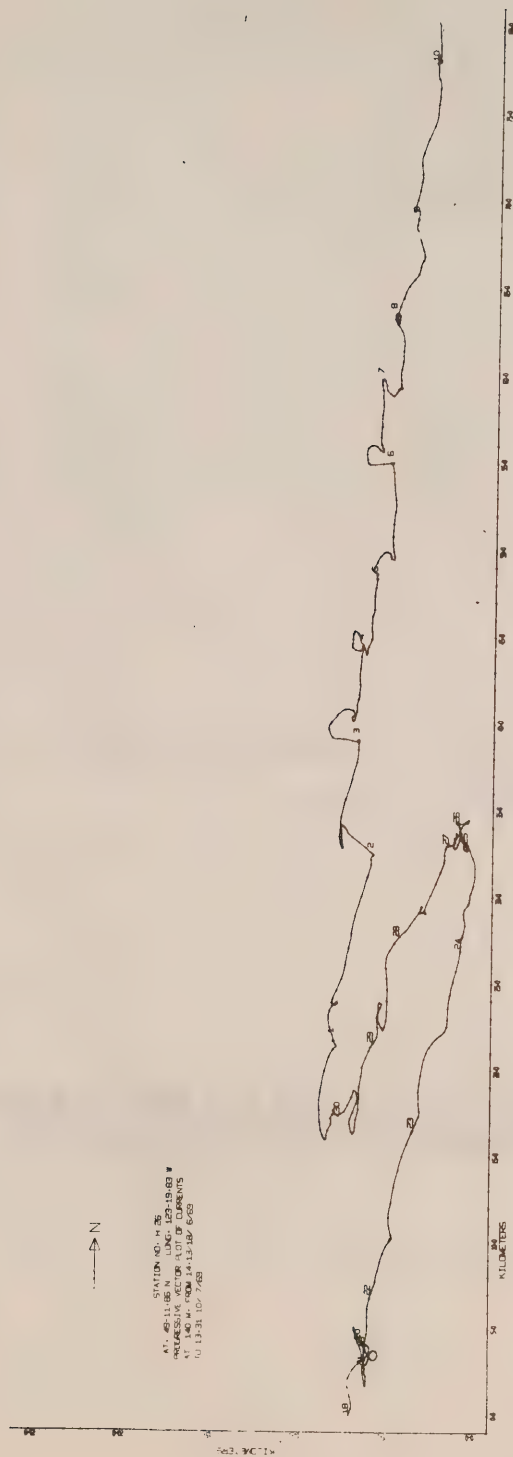


Fig. 22e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 22-day period during June 18 through July 10, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 15.42/10/ 7/69 TO 20.22/24/ 7/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300
			I	I	I	I	I	I	I
0	0	0	0						
10	184	9	0	0	0	0	0	0	0
20	84	4	0	0	0	0	0	0	0
30	99	5	0	0	0	0	0	0	0
40	203	10	0	0	0	0	0	0	0
50	121	6	0	0	0	0	0	0	0
60	171	8	0	0	0	0	0	0	0
70	91	4	0	0	0	0	0	0	0
80	127	6	0	0	0	0	0	0	0
90	74	4	0	0	0	0	0	0	0
100	78	4	0	0	0	0	0	0	0
110	126	6	0	0	0	0	0	0	0
120	94	5	0	0	0	0	0	0	0
130	116	6	0	0	0	0	0	0	0
140	49	2	0	0	0	0	0	0	0
150	75	4	0	0	0	0	0	0	0
160	35	2	0	0	0	0	0	0	0
170	44	2	0	0	0	0	0	0	0
180	44	2	0	0	0	0	0	0	0
190	23	1	0	0	0	0	0	0	0
200	49	2	0	0	0	0	0	0	0
210	8	0	0	0	0	0	0	0	0
220	21	1	0	0	0	0	0	0	0
230	8	0	0	0	0	0	0	0	0
240	9	0	0	0	0	0	0	0	0
250	22	1	0	0	0	0	0	0	0
260	13	1	0	0	0	0	0	0	0
270	24	1	0	0	0	0	0	0	0
280	17	1	0	0	0	0	0	0	0
290	10	0	0	0	0	0	0	0	0
300	4	0	0	0	0	0	0	0	0
310	4	0	0	0	0	0	0	0	0
320	6	0	0	0	0	0	0	0	0
330	1	0	0	0	0	0	0	0	0
340	2	0	0	0	0	0	0	0	0
350	3	0	0	0	0	0	0	0	0
360	2	0	0	0	0	0	0	0	0
370	1	0	0	0	0	0	0	0	0
380	1	0	0	0	0	0	0	0	0
390	1	0	0	0	0	0	0	0	0
400	1	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 400 = 0

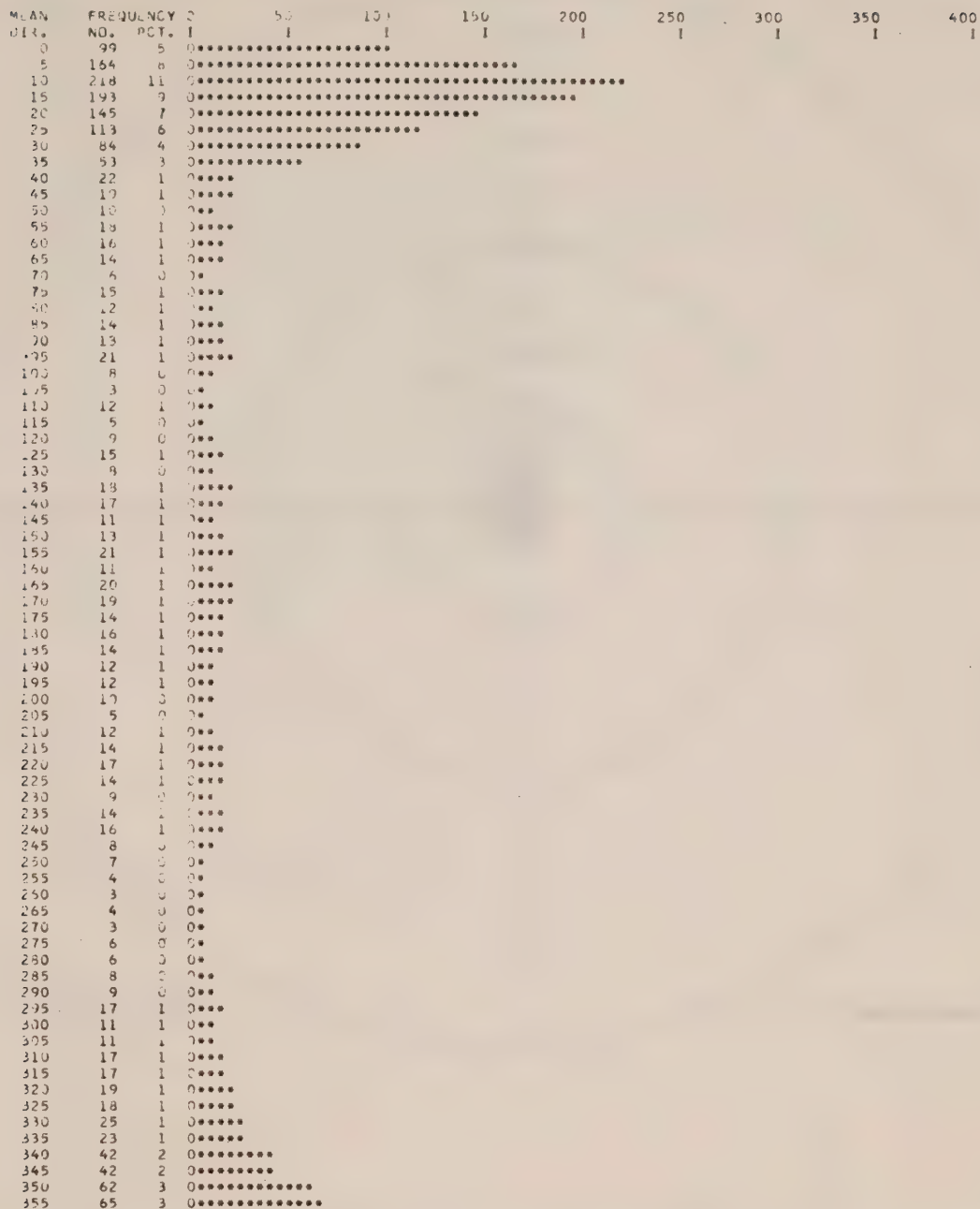
NUMBER OF OBSERVATIONS = 2045

MEAN SPEED = 96 MM/SEC

FIG. 23A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JULY 10 THROUGH JULY 24, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.35 N LONG. 123-17.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 15.42/10/ 7/69 TO 20.22/24/ 7/69



NUMBER OF OBSERVATIONS = 2045

FIG. 23b. A HISTOGRAM OF DIRECTION (*TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JULY 10 THROUGH JULY 24, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 15.42/10/ 7/69 TO 20.22/24/ 7/69

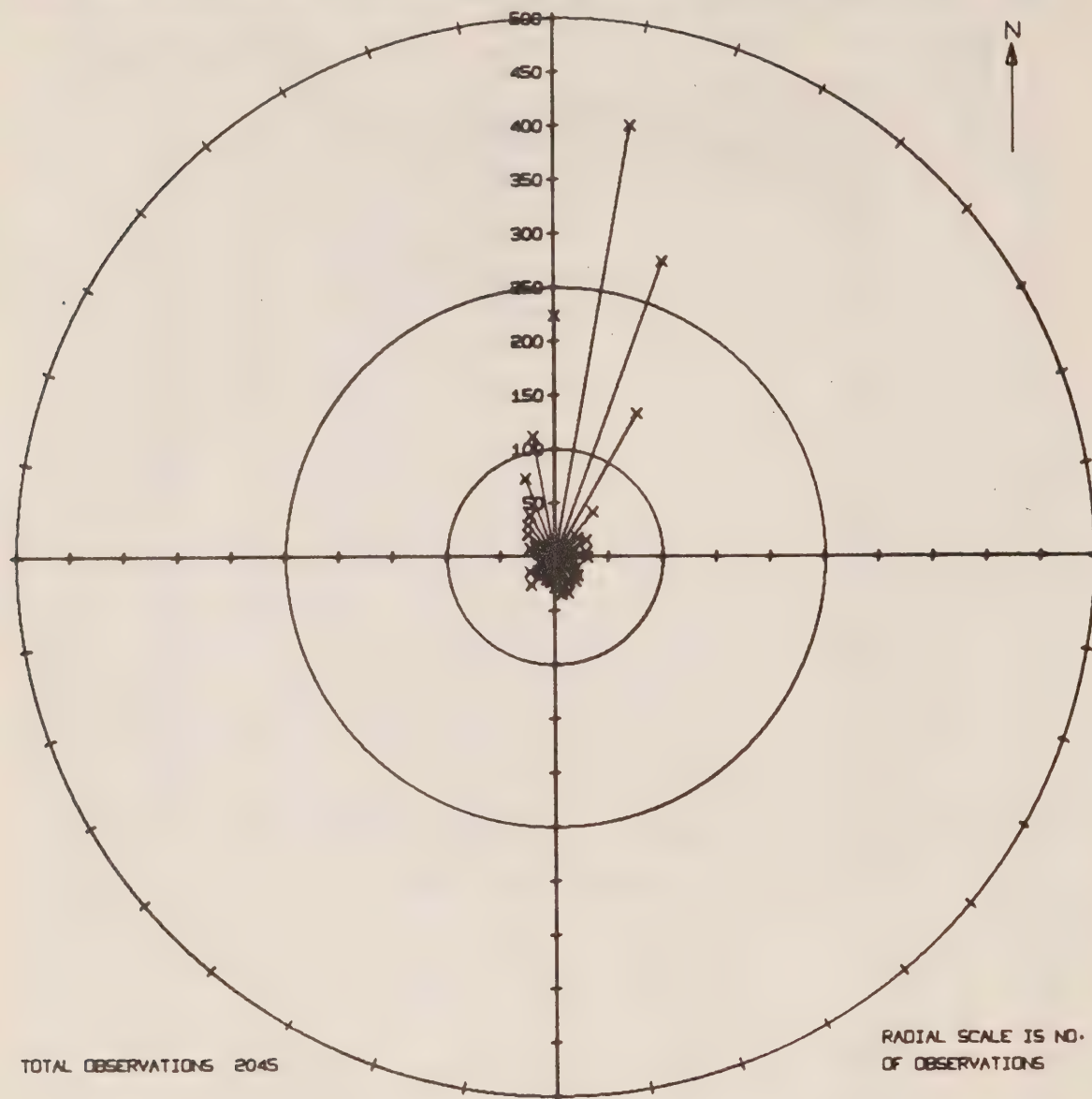
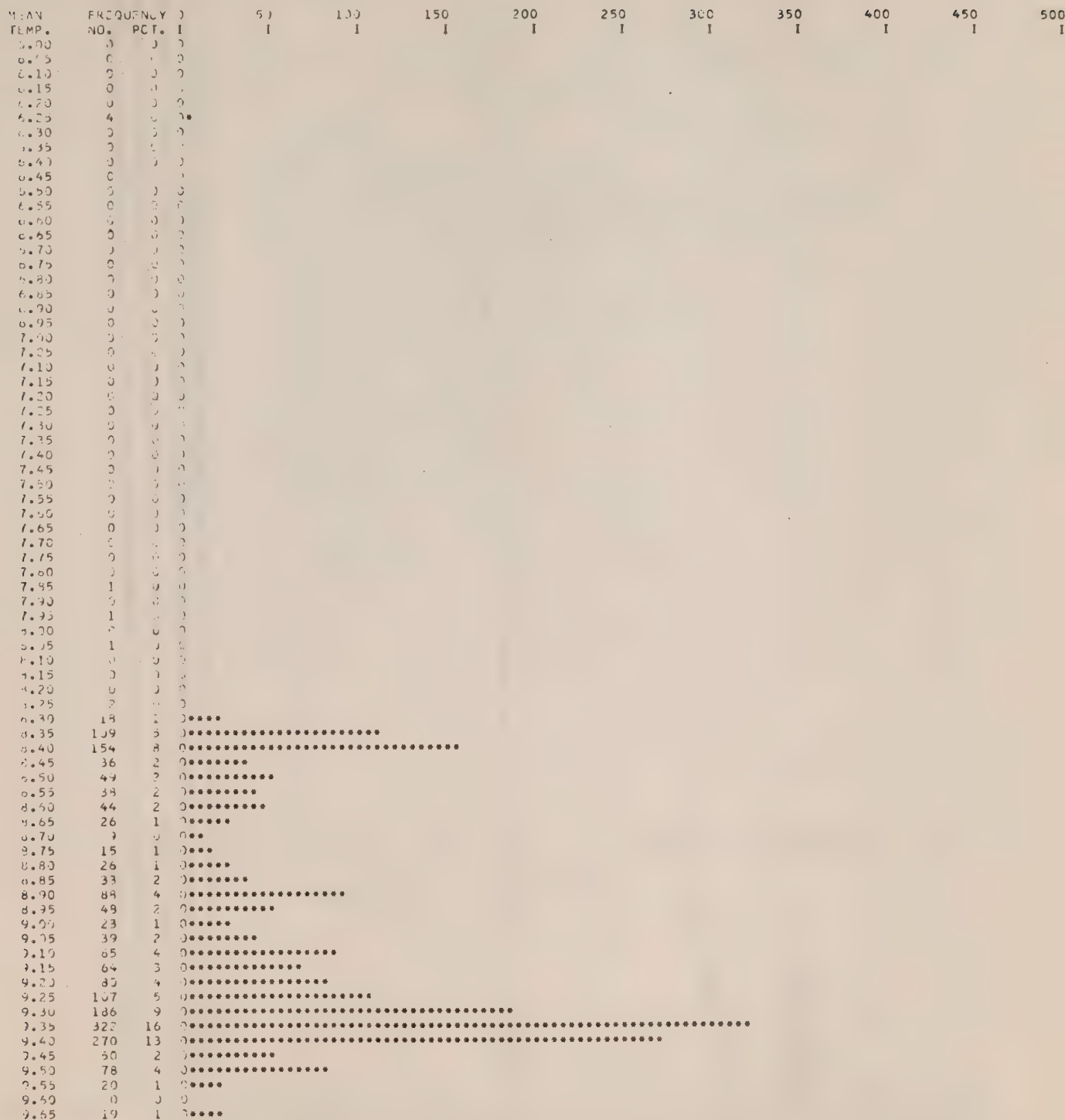


FIG. 23c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JULY 10 THROUGH JULY 24, 1969.

STATION NO. H-26 LAT. 49-11.38 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 15.42/10/ 7/69 TO 20.22/24/ 7/69



NUMBER OF TEMP. GREATER THAN 9.6. = 0

NUMBER OF OBSERVATIONS = 2045

MEAN TEMP = 9.06 DEG. C.

FIG. 23b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 14-DAY PERIOD DURING JULY 10 THROUGH JULY 24, 1969.

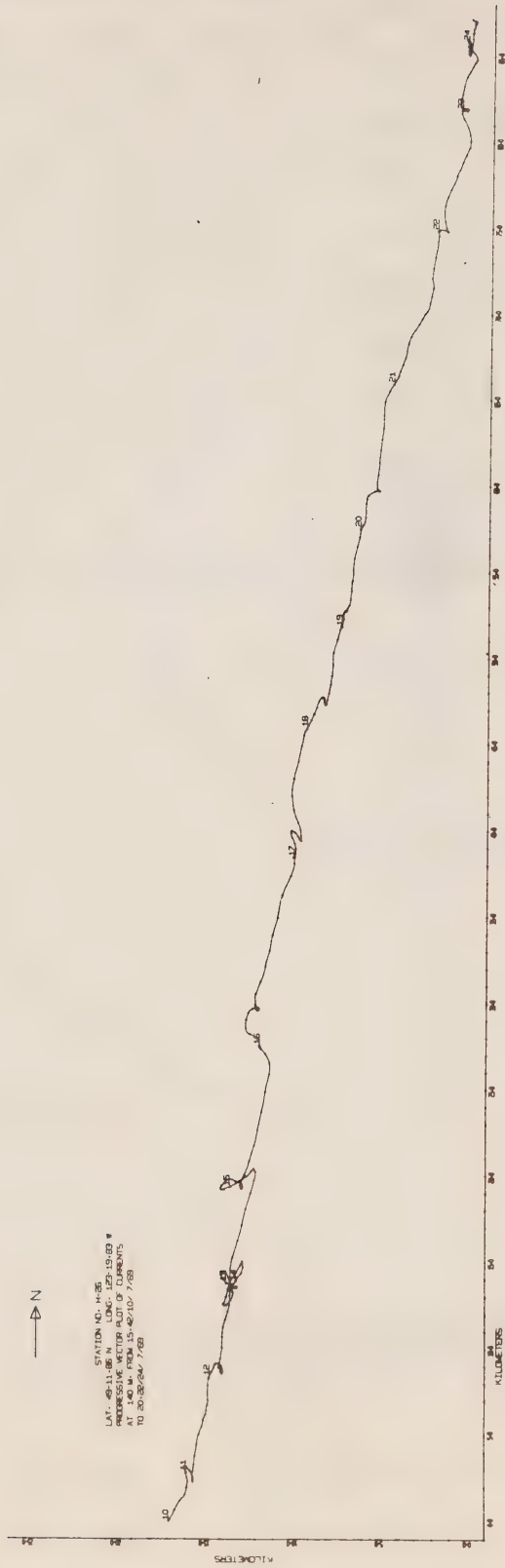


Fig. 23e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 14-day period during July 10 through July 24, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 12.23/26/ 8/69 TO 8.22/19/ 9/69

MEAN SPEED	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I
0	0							
10	1		*****					
20	42	1	0*****					
30	74	2	0*****					
40	154	5	0*****					
50	160	5	0*****					
60	263	9	0*****					
70	143	5	0*****					
80	203	7	0*****					
90	131	4	0*****					
100	106	4	0*****					
110	170	6	0*****					
120	128	4	0*****					
130	157	5	0*****					
140	74	2	0*****					
150	139	5	0*****					
160	79	3	0*****					
170	91	3	0*****					
180	95	3	0*****					
190	67	2	0*****					
200	98	3	0*****					
210	68	2	0*****					
220	90	3	0*****					
230	45	2	0*****					
240	4		*****					
250	30	2	0*****					
260	44	1	0*****					
270	44	1	0*****					
280	15	1	0***					
290	14	0	0***					
300	18	1	0***					
310	12	0	0**					
320	15	1	0***					
330	16	1	0***					
340	8	0	0**					
350	8	0	0**					
360	2	0	0					
370	0	0	0					
380	0	0	0					
390	1	0	0					

NUMBER OF SPEEDS GREATER THAN 390 = 0

NUMBER OF OBSERVATIONS = 2999

MEAN SPEED = 124 MM/SEC

FIG. 24A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 12.23/28/ 8/69 TO 8.22/18/ 9/69

MEAN DIR.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400
0	187	6	0	0	0	0	0	0	0	0	0
5	294	10	0	0	0	0	0	0	0	0	0
10	269	9	0	0	0	0	0	0	0	0	0
15	250	8	0	0	0	0	0	0	0	0	0
20	274	9	0	0	0	0	0	0	0	0	0
25	162	5	0	0	0	0	0	0	0	0	0
30	115	4	0	0	0	0	0	0	0	0	0
35	72	2	0	0	0	0	0	0	0	0	0
40	49	2	0	0	0	0	0	0	0	0	0
45	42	1	0	0	0	0	0	0	0	0	0
50	37	1	0	0	0	0	0	0	0	0	0
55	20	1	0	0	0	0	0	0	0	0	0
60	15	1	0	0	0	0	0	0	0	0	0
65	20	1	0	0	0	0	0	0	0	0	0
70	20	1	0	0	0	0	0	0	0	0	0
75	15	1	0	0	0	0	0	0	0	0	0
80	19	1	0	0	0	0	0	0	0	0	0
85	11	0	0	0	0	0	0	0	0	0	0
90	11	0	0	0	0	0	0	0	0	0	0
95	8	0	0	0	0	0	0	0	0	0	0
100	8	0	0	0	0	0	0	0	0	0	0
105	8	0	0	0	0	0	0	0	0	0	0
110	6	0	0	0	0	0	0	0	0	0	0
115	15	1	0	0	0	0	0	0	0	0	0
120	10	0	0	0	0	0	0	0	0	0	0
125	11	0	0	0	0	0	0	0	0	0	0
130	18	1	0	0	0	0	0	0	0	0	0
135	15	1	0	0	0	0	0	0	0	0	0
140	14	0	0	0	0	0	0	0	0	0	0
145	12	0	0	0	0	0	0	0	0	0	0
150	17	1	0	0	0	0	0	0	0	0	0
155	11	0	0	0	0	0	0	0	0	0	0
160	11	0	0	0	0	0	0	0	0	0	0
165	7	0	0	0	0	0	0	0	0	0	0
170	10	0	0	0	0	0	0	0	0	0	0
175	9	0	0	0	0	0	0	0	0	0	0
180	10	0	0	0	0	0	0	0	0	0	0
185	13	0	0	0	0	0	0	0	0	0	0
190	22	1	0	0	0	0	0	0	0	0	0
195	31	1	0	0	0	0	0	0	0	0	0
200	15	1	0	0	0	0	0	0	0	0	0
205	12	0	0	0	0	0	0	0	0	0	0
210	8	0	0	0	0	0	0	0	0	0	0
215	8	0	0	0	0	0	0	0	0	0	0
220	9	0	0	0	0	0	0	0	0	0	0
225	9	0	0	0	0	0	0	0	0	0	0
230	9	0	0	0	0	0	0	0	0	0	0
235	19	1	0	0	0	0	0	0	0	0	0
240	9	0	0	0	0	0	0	0	0	0	0
245	9	0	0	0	0	0	0	0	0	0	0
250	12	0	0	0	0	0	0	0	0	0	0
255	13	0	0	0	0	0	0	0	0	0	0
260	13	0	0	0	0	0	0	0	0	0	0
265	20	1	0	0	0	0	0	0	0	0	0
270	25	1	0	0	0	0	0	0	0	0	0
275	12	0	0	0	0	0	0	0	0	0	0
280	12	0	0	0	0	0	0	0	0	0	0
285	13	0	0	0	0	0	0	0	0	0	0
290	17	1	0	0	0	0	0	0	0	0	0
295	22	1	0	0	0	0	0	0	0	0	0
300	21	1	0	0	0	0	0	0	0	0	0
305	12	0	0	0	0	0	0	0	0	0	0
310	19	1	0	0	0	0	0	0	0	0	0
315	13	0	0	0	0	0	0	0	0	0	0
320	17	1	0	0	0	0	0	0	0	0	0
325	27	1	0	0	0	0	0	0	0	0	0
330	38	1	0	0	0	0	0	0	0	0	0
335	38	1	0	0	0	0	0	0	0	0	0
340	63	2	0	0	0	0	0	0	0	0	0
345	89	3	0	0	0	0	0	0	0	0	0
350	121	4	0	0	0	0	0	0	0	0	0
355	127	4	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 2999

FIG. 24b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H-26 LAT. 48-11.86 N LONG. 123-19.83 W
 DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 12.23/28/ 8/69 TO 8.22/18/ 9/69

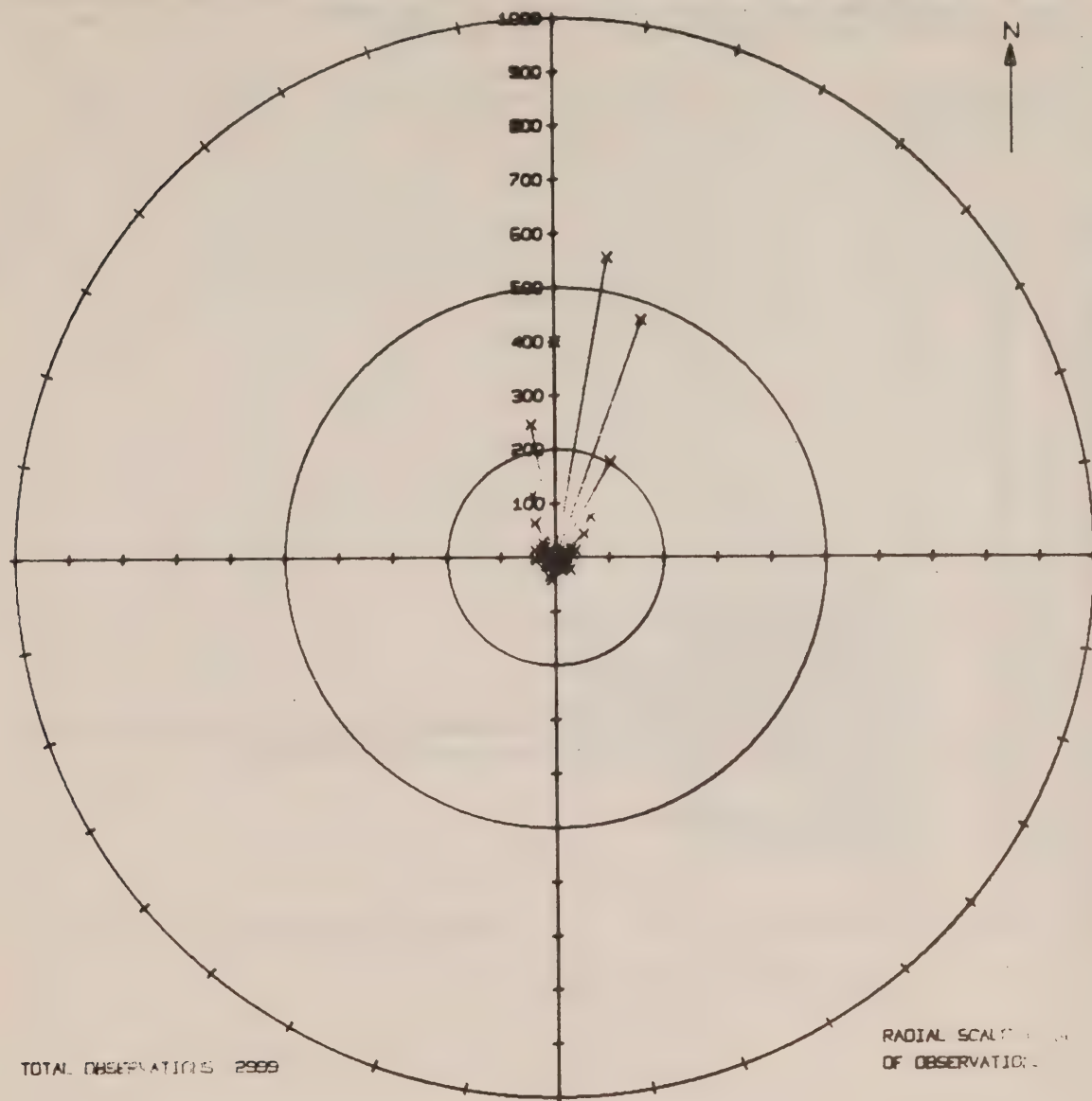


FIG. 24c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 12.23/28/ 8/69 TO 8.22/18/ 9/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I
8.00	0	0 0							
8.05	0	0 0							
8.10	0	0 0							
8.15	0	0 0							
8.20	0	0 0							
8.25	0	0 0							
8.30	0	0 0							
8.35	0	0 0							
8.40	0	0 0							
8.45	0	0 0							
8.50	0	0 0							
8.55	0	0 0							
8.60	0	0 0							
8.65	0	0 0							
8.70	0	0 0							
8.75	0	0 0							
8.80	0	0 0							
8.85	0	0 0							
8.90	0	0 0							
8.95	1	0 0							
9.00	33	1 0***							
9.05	265	9 0*****							
9.10	147	5 0*****							
9.15	259	9 0*****							
9.20	216	7 0*****							
9.25	270	9 0*****							
9.30	637	21 0*****							
9.35	475	16 0*****							
9.40	178	6 0*****							
9.45	60	2 0*****							
9.50	209	7 0*****							
9.55	113	4 0*****							
9.60	120	4 0*****							
9.65	16	1 0**							

NUMBER OF TEMP. GREATER THAN 9.65 = 0 NUMBER OF OBSERVATIONS = 290

MEAN TEMP = 9.29 DEG. C.

FIG. 24D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 21-DAY PERIOD DURING AUGUST 28 THROUGH SEPTEMBER 18, 1969.

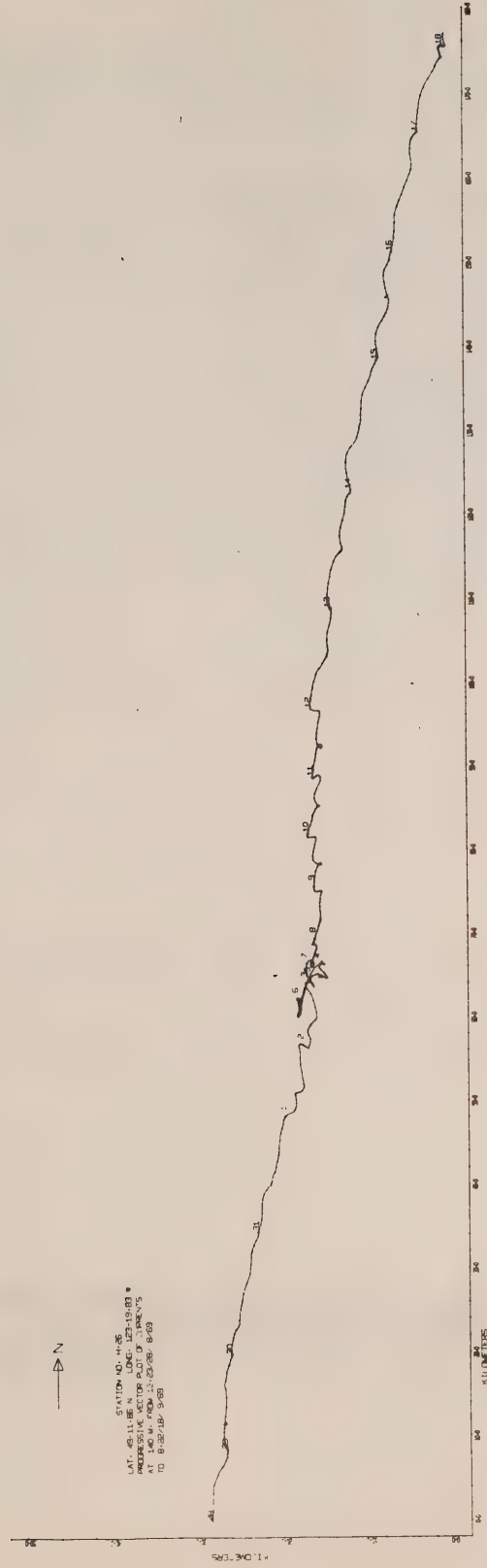


Fig. 24e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 21-day period during August 28 through September 18, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.96 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 11. 2/18/ 9/69 TO 9.16/16/10/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350
			I	I	I	I	I	I	I	I
0	192	5	0	0	0	0	0	0	0	0
10	94	2	0	0	0	0	0	0	0	0
20	93	2	0	0	0	0	0	0	0	0
30	227	6	0	0	0	0	0	0	0	0
40	168	4	0	0	0	0	0	0	0	0
50	287	7	0	0	0	0	0	0	0	0
60	181	5	0	0	0	0	0	0	0	0
70	267	7	0	0	0	0	0	0	0	0
80	156	4	0	0	0	0	0	0	0	0
90	158	4	0	0	0	0	0	0	0	0
100	232	6	0	0	0	0	0	0	0	0
110	113	3	0	0	0	0	0	0	0	0
120	129	3	0	0	0	0	0	0	0	0
130	99	2	0	0	0	0	0	0	0	0
140	174	4	0	0	0	0	0	0	0	0
150	107	3	0	0	0	0	0	0	0	0
160	114	3	0	0	0	0	0	0	0	0
170	125	3	0	0	0	0	0	0	0	0
180	91	2	0	0	0	0	0	0	0	0
190	137	3	0	0	0	0	0	0	0	0
200	69	2	0	0	0	0	0	0	0	0
210	137	3	0	0	0	0	0	0	0	0
220	67	2	0	0	0	0	0	0	0	0
230	79	2	0	0	0	0	0	0	0	0
240	103	3	0	0	0	0	0	0	0	0
250	75	2	0	0	0	0	0	0	0	0
260	73	2	0	0	0	0	0	0	0	0
270	45	1	0	0	0	0	0	0	0	0
280	55	1	0	0	0	0	0	0	0	0
290	36	1	0	0	0	0	0	0	0	0
300	17	0	0	0	0	0	0	0	0	0
310	22	1	0	0	0	0	0	0	0	0
320	23	1	0	0	0	0	0	0	0	0
330	22	1	0	0	0	0	0	0	0	0
340	7	0	0	0	0	0	0	0	0	0
350	7	0	0	0	0	0	0	0	0	0
360	7	0	0	0	0	0	0	0	0	0
370	7	0	0	0	0	0	0	0	0	0
380	7	0	0	0	0	0	0	0	0	0
390	1	0	0	0	0	0	0	0	0	0
400	1	0	0	0	0	0	0	0	0	0
410	3	0	0	0	0	0	0	0	0	0
420	2	0	0	0	0	0	0	0	0	0
430	2	0	0	0	0	0	0	0	0	0
440	1	0	0	0	0	0	0	0	0	0
450	1	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 450 = 0

NUMBER OF OBSERVATIONS = 4021

MEAN SPEED = 132 MM/SEC

FIG. 25A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 11. 2/18/ 9/69 TO 9.15/16/10/69



NUMBER OF OBSERVATIONS = 4021

FIG. 25B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 11. 2/18/ 9/69 TO 9.16/16/10/69

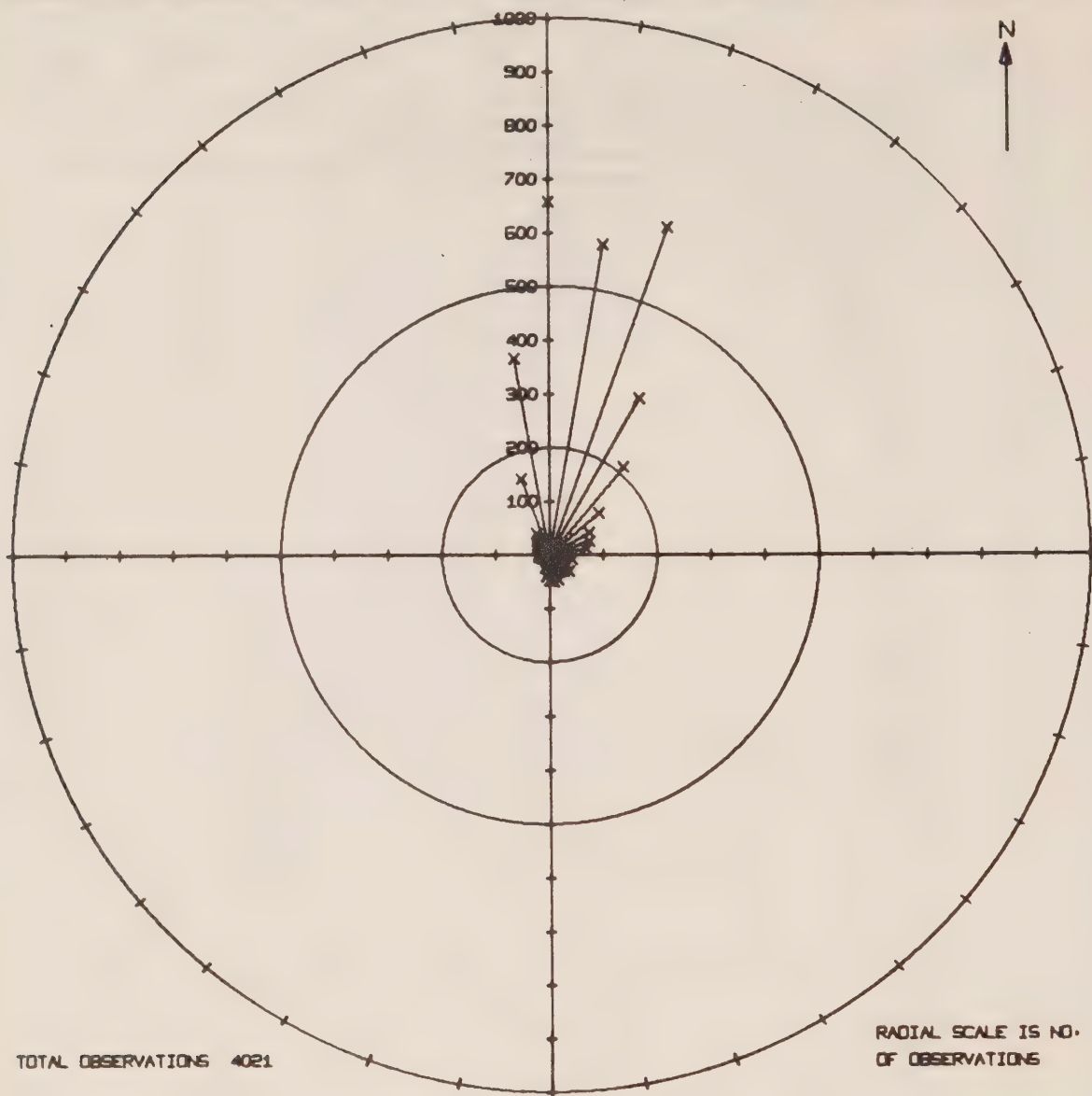


FIG. 25c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

STATION NO. H-26 LAT. 49-11.96 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 11. 2/13/ 9/69 TO 9.16/16/10/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
8.00	1	0	0	0	0	0	0	0	0	0	0	0
8.05	0	0	0	0	0	0	0	0	0	0	0	0
8.10	0	0	0	0	0	0	0	0	0	0	0	0
8.15	0	0	0	0	0	0	0	0	0	0	0	0
8.20	0	0	0	0	0	0	0	0	0	0	0	0
8.25	0	0	0	0	0	0	0	0	0	0	0	0
8.30	0	0	0	0	0	0	0	0	0	0	0	0
8.35	0	0	0	0	0	0	0	0	0	0	0	0
8.40	0	0	0	0	0	0	0	0	0	0	0	0
8.45	0	0	0	0	0	0	0	0	0	0	0	0
8.50	0	0	0	0	0	0	0	0	0	0	0	0
8.55	0	0	0	0	0	0	0	0	0	0	0	0
8.60	1	0	0	0	0	0	0	0	0	0	0	0
8.65	1	0	0	0	0	0	0	0	0	0	0	0
8.70	0	0	0	0	0	0	0	0	0	0	0	0
8.75	0	0	0	0	0	0	0	0	0	0	0	0
8.80	0	0	0	0	0	0	0	0	0	0	0	0
8.85	0	0	0	0	0	0	0	0	0	0	0	0
8.90	0	0	0	0	0	0	0	0	0	0	0	0
8.95	0	0	0	0	0	0	0	0	0	0	0	0
9.00	53	1	0	*****								
9.05	334	10	0	*****								
9.10	830	21	0	*****								
9.15	665	17	0	*****								
9.20	452	11	0	*****								
9.25	639	16	0	*****								
9.30	568	14	0	*****								
9.35	367	9	0	*****								
9.40	59	1	0	*****								
9.45	0	0	0	0	0	0	0	0	0	0	0	0
9.50	1	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 9.50 = 0

NUMBER OF OBSERVATIONS = 4021

MEAN TEMP = 9.19 DEG. C.

FIG. 25b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 28-DAY PERIOD DURING SEPTEMBER 18 THROUGH OCTOBER 16, 1969.

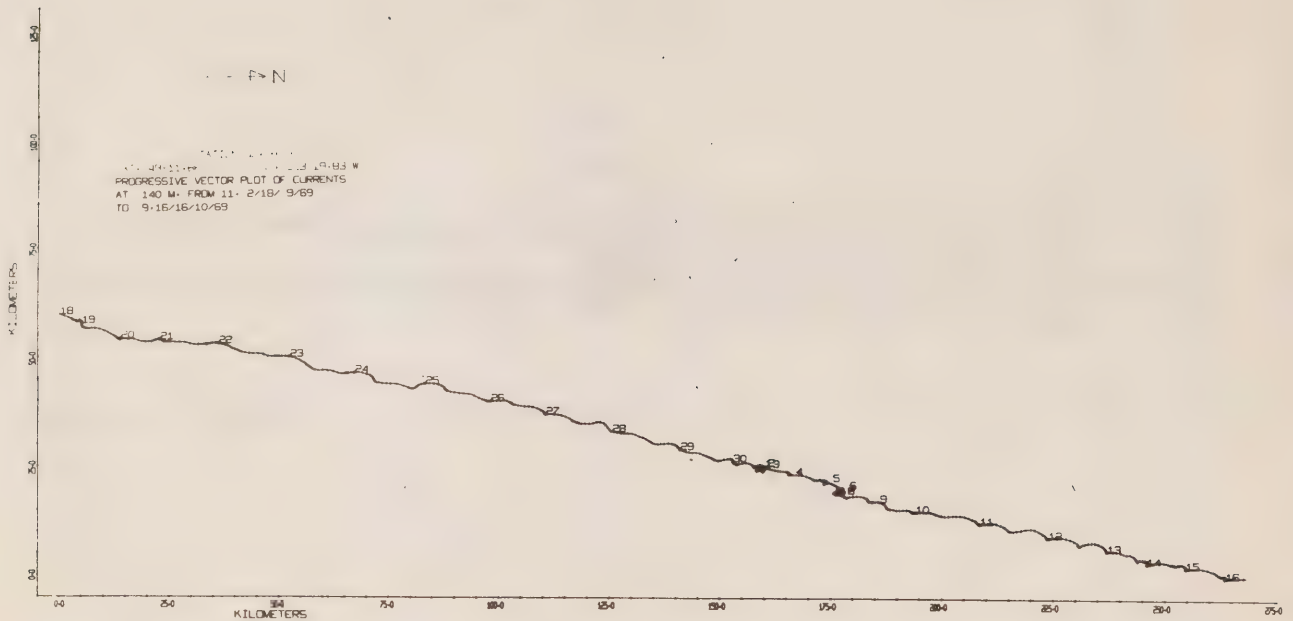


Fig. 25e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 28-day period during September 18 through October 16, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 14.10/16/10/69 TO 8. 9/25/11/69

MEAN SPEED	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
0	0	0	0									
10	217	4	0	0	0	0	0	0	0	0	0	0
20	109	2	0	0	0	0	0	0	0	0	0	0
30	152	3	0	0	0	0	0	0	0	0	0	0
40	347	6	0	0	0	0	0	0	0	0	0	0
50	235	4	0	0	0	0	0	0	0	0	0	0
60	388	7	0	0	0	0	0	0	0	0	0	0
70	229	4	0	0	0	0	0	0	0	0	0	0
80	424	7	0	0	0	0	0	0	0	0	0	0
90	255	4	0	0	0	0	0	0	0	0	0	0
100	224	4	0	0	0	0	0	0	0	0	0	0
110	318	6	0	0	0	0	0	0	0	0	0	0
120	263	5	0	0	0	0	0	0	0	0	0	0
130	354	6	0	0	0	0	0	0	0	0	0	0
140	203	4	0	0	0	0	0	0	0	0	0	0
150	323	6	0	0	0	0	0	0	0	0	0	0
160	156	3	0	0	0	0	0	0	0	0	0	0
170	152	3	0	0	0	0	0	0	0	0	0	0
180	207	4	0	0	0	0	0	0	0	0	0	0
190	111	2	0	0	0	0	0	0	0	0	0	0
200	167	3	0	0	0	0	0	0	0	0	0	0
210	101	2	0	0	0	0	0	0	0	0	0	0
220	137	2	0	0	0	0	0	0	0	0	0	0
230	69	1	0	0	0	0	0	0	0	0	0	0
240	57	1	0	0	0	0	0	0	0	0	0	0
250	82	1	0	0	0	0	0	0	0	0	0	0
260	46	1	0	0	0	0	0	0	0	0	0	0
270	62	1	0	0	0	0	0	0	0	0	0	0
280	33	1	0	0	0	0	0	0	0	0	0	0
290	51	1	0	0	0	0	0	0	0	0	0	0
300	37	1	0	0	0	0	0	0	0	0	0	0
310	29	1	0	0	0	0	0	0	0	0	0	0
320	37	1	0	0	0	0	0	0	0	0	0	0
330	24	0	0	0	0	0	0	0	0	0	0	0
340	26	0	0	0	0	0	0	0	0	0	0	0
350	20	0	0	0	0	0	0	0	0	0	0	0
360	21	0	0	0	0	0	0	0	0	0	0	0
370	6	0	0	0	0	0	0	0	0	0	0	0
380	9	0	0	0	0	0	0	0	0	0	0	0
390	14	0	0	0	0	0	0	0	0	0	0	0
400	15	0	0	0	0	0	0	0	0	0	0	0
410	11	0	0	0	0	0	0	0	0	0	0	0
420	0	0	0	0	0	0	0	0	0	0	0	0
430	2	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 430 = 0

NUMBER OF OBSERVATIONS = 5723

MEAN SPEED = 126 MM/SEC

FIG. 26a. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 14.19/16/10/69 TO 8. 9/25/11/69

MEAN DIR.	FREQUENCY NO.	PCT.	0	100	200	300	400	500	600	700
0	390	7	0	0	0	0	0	0	0	0
5	416	7	0	0	0	0	0	0	0	0
10	383	7	0	0	0	0	0	0	0	0
15	400	7	0	0	0	0	0	0	0	0
20	513	9	0	0	0	0	0	0	0	0
25	289	5	0	0	0	0	0	0	0	0
30	190	3	0	0	0	0	0	0	0	0
35	124	2	0	0	0	0	0	0	0	0
40	99	2	0	0	0	0	0	0	0	0
45	117	2	0	0	0	0	0	0	0	0
50	91	2	0	0	0	0	0	0	0	0
55	60	1	0	0	0	0	0	0	0	0
60	49	1	0	0	0	0	0	0	0	0
65	56	1	0	0	0	0	0	0	0	0
70	37	1	0	0	0	0	0	0	0	0
75	47	1	0	0	0	0	0	0	0	0
80	35	1	0	0	0	0	0	0	0	0
85	26	0	0	0	0	0	0	0	0	0
90	24	0	0	0	0	0	0	0	0	0
95	21	0	0	0	0	0	0	0	0	0
100	33	1	0	0	0	0	0	0	0	0
105	29	1	0	0	0	0	0	0	0	0
110	21	0	0	0	0	0	0	0	0	0
115	20	0	0	0	0	0	0	0	0	0
120	19	0	0	0	0	0	0	0	0	0
125	23	1	0	0	0	0	0	0	0	0
130	22	0	0	0	0	0	0	0	0	0
135	24	0	0	0	0	0	0	0	0	0
140	27	0	0	0	0	0	0	0	0	0
145	35	1	0	0	0	0	0	0	0	0
150	37	1	0	0	0	0	0	0	0	0
155	25	0	0	0	0	0	0	0	0	0
160	25	0	0	0	0	0	0	0	0	0
165	55	1	0	0	0	0	0	0	0	0
170	58	1	0	0	0	0	0	0	0	0
175	52	1	0	0	0	0	0	0	0	0
180	49	1	0	0	0	0	0	0	0	0
185	65	1	0	0	0	0	0	0	0	0
190	59	1	0	0	0	0	0	0	0	0
195	32	1	0	0	0	0	0	0	0	0
200	25	0	0	0	0	0	0	0	0	0
205	21	0	0	0	0	0	0	0	0	0
210	21	0	0	0	0	0	0	0	0	0
215	20	0	0	0	0	0	0	0	0	0
220	18	0	0	0	0	0	0	0	0	0
225	22	0	0	0	0	0	0	0	0	0
230	21	0	0	0	0	0	0	0	0	0
235	34	1	0	0	0	0	0	0	0	0
240	23	0	0	0	0	0	0	0	0	0
245	17	0	0	0	0	0	0	0	0	0
250	15	0	0	0	0	0	0	0	0	0
255	18	0	0	0	0	0	0	0	0	0
260	17	0	0	0	0	0	0	0	0	0
265	8	0	0	0	0	0	0	0	0	0
270	13	0	0	0	0	0	0	0	0	0
275	20	0	0	0	0	0	0	0	0	0
280	14	0	0	0	0	0	0	0	0	0
285	19	0	0	0	0	0	0	0	0	0
290	25	0	0	0	0	0	0	0	0	0
295	22	0	0	0	0	0	0	0	0	0
300	16	0	0	0	0	0	0	0	0	0
305	21	0	0	0	0	0	0	0	0	0
310	24	0	0	0	0	0	0	0	0	0
315	47	1	0	0	0	0	0	0	0	0
320	58	1	0	0	0	0	0	0	0	0
325	62	1	0	0	0	0	0	0	0	0
330	75	1	0	0	0	0	0	0	0	0
335	103	2	0	0	0	0	0	0	0	0
340	136	2	0	0	0	0	0	0	0	0
345	174	3	0	0	0	0	0	0	0	0
350	234	4	0	0	0	0	0	0	0	0
355	292	5	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 5723

FIG. 26B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969,

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 14.19/16/10/69 TO 8. 9/25/11/69

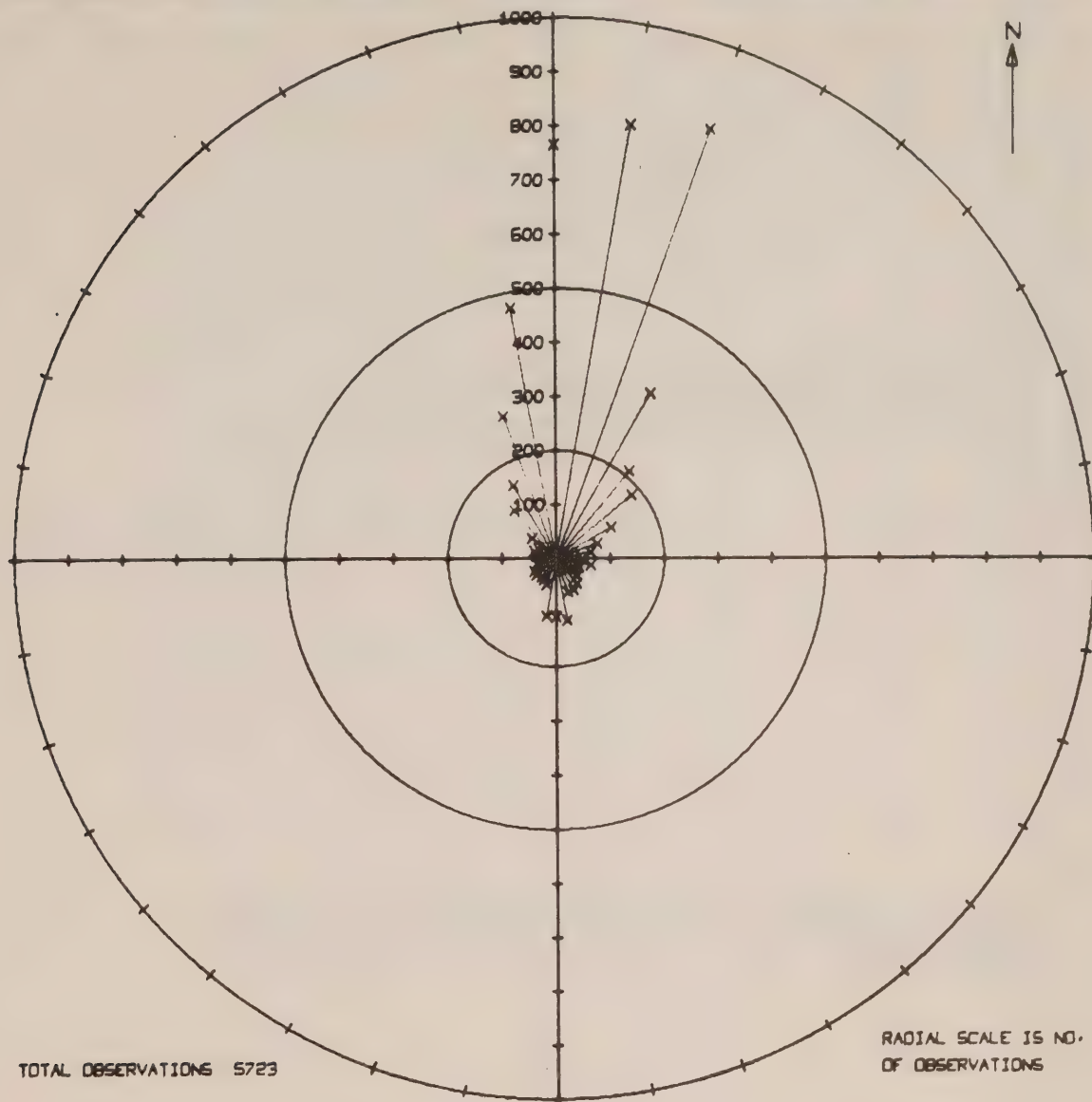


FIG. 26c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

STATION NO. H-26 LAT. 49-11.80 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 14.19/16/10/69 TO 8. 9/25/11/69

TEMP.	FREQUENCY NO.	PCT. I	200 I	400 I	600 I	800 I	1000 I	1200 I	1400 I	1600 I	1800 I	2000 I
8.00	0	0	0	0	0	0	0	0	0	0	0	0
8.05	0	0	0	0	0	0	0	0	0	0	0	0
8.10	0	0	0	0	0	0	0	0	0	0	0	0
8.15	0	0	0	0	0	0	0	0	0	0	0	0
8.20	0	0	0	0	0	0	0	0	0	0	0	0
8.25	0	0	0	0	0	0	0	0	0	0	0	0
8.30	0	0	0	0	0	0	0	0	0	0	0	0
8.35	0	0	0	0	0	0	0	0	0	0	0	0
8.40	0	0	0	0	0	0	0	0	0	0	0	0
8.45	0	0	0	0	0	0	0	0	0	0	0	0
8.50	0	0	0	0	0	0	0	0	0	0	0	0
8.55	0	0	0	0	0	0	0	0	0	0	0	0
8.60	0	0	0	0	0	0	0	0	0	0	0	0
8.65	0	0	0	0	0	0	0	0	0	0	0	0
8.70	0	0	0	0	0	0	0	0	0	0	0	0
8.75	0	0	0	0	0	0	0	0	0	0	0	0
8.80	326	6	0	0	0	0	0	0	0	0	0	0
8.85	1225	21	0	0	0	0	0	0	0	0	0	0
8.90	1030	18	0	0	0	0	0	0	0	0	0	0
8.95	750	13	0	0	0	0	0	0	0	0	0	0
9.00	1378	24	0	0	0	0	0	0	0	0	0	0
9.05	1004	13	0	0	0	0	0	0	0	0	0	0
9.10	3	0	0	0	0	0	0	0	0	0	0	0
9.15	2	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 9.15 = 0

NUMBER OF OBSERVATIONS = 5723

MEAN TEMP = 8.94 DEG. C.

FIG. 26d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 40-DAY PERIOD DURING OCTOBER 16 THROUGH NOVEMBER 25, 1969.

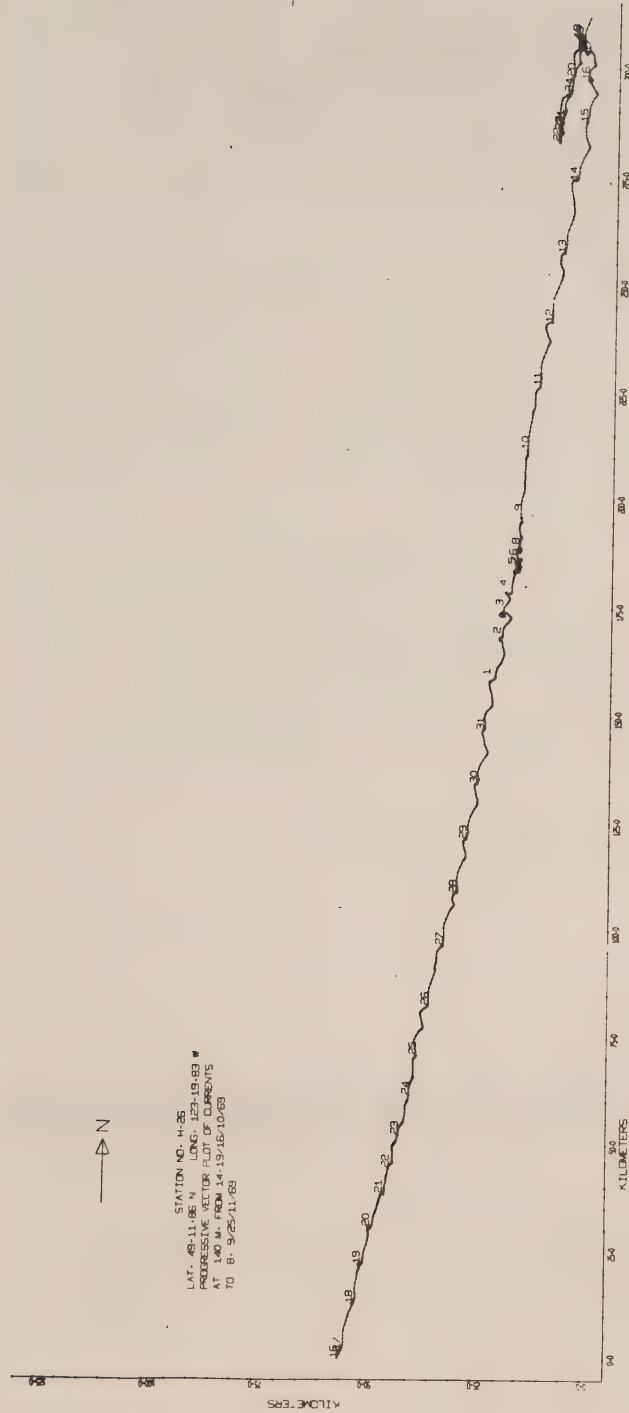


Fig. 26e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 40-day period during October 16 through November 25, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.80 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 10.27/25/11/69 TO 2.11/11/12/69

MEAN SPEED	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I
0	0	0	0	0	0	0	0	0
10	175	8	0	0	0	0	0	0
20	58	2	0	0	0	0	0	0
30	69	3	0	0	0	0	0	0
40	164	7	0	0	0	0	0	0
50	141	6	0	0	0	0	0	0
60	253	11	0	0	0	0	0	0
70	150	7	0	0	0	0	0	0
80	105	5	0	0	0	0	0	0
90	113	5	0	0	0	0	0	0
100	117	5	0	0	0	0	0	0
110	134	6	0	0	0	0	0	0
120	79	4	0	0	0	0	0	0
130	121	5	0	0	0	0	0	0
140	70	3	0	0	0	0	0	0
150	96	4	0	0	0	0	0	0
160	47	2	0	0	0	0	0	0
170	35	2	0	0	0	0	0	0
180	57	3	0	0	0	0	0	0
190	38	2	0	0	0	0	0	0
200	31	1	0	0	0	0	0	0
210	19	1	0	0	0	0	0	0
220	13	1	0	0	0	0	0	0
230	5	0	0	0	0	0	0	0
240	2	0	0	0	0	0	0	0
250	6	0	0	0	0	0	0	0
260	5	0	0	0	0	0	0	0
270	12	1	0	0	0	0	0	0
280	2	0	0	0	0	0	0	0
290	4	0	0	0	0	0	0	0
300	4	0	0	0	0	0	0	0
310	4	0	0	0	0	0	0	0
320	7	0	0	0	0	0	0	0
330	3	0	0	0	0	0	0	0
340	2	0	0	0	0	0	0	0
350	2	0	0	0	0	0	0	0
360	1	0	0	0	0	0	0	0
370	1	0	0	0	0	0	0	0
380	5	0	0	0	0	0	0	0
390	1	0	0	0	0	0	0	0
400	1	0	0	0	0	0	0	0
410	4	0	0	0	0	0	0	0

NUMBER OF SPEEDS GREATER THAN 410 = 0

NUMBER OF OBSERVATIONS = 2255

MEAN SPEED = 94 MM/SEC

FIG. 27A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 15-DAY PERIOD DURING NOVEMBER 25 THROUGH DECEMBER 11, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 10.27/25/11/69 TO 2.11/11/12/69



NUMBER OF OBSERVATIONS = 2255

FIG. 27B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 15-DAY PERIOD DURING NOVEMBER 25 THROUGH DECEMBER 11, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 10.27/25/11/69 TO 2.11/11/12/69

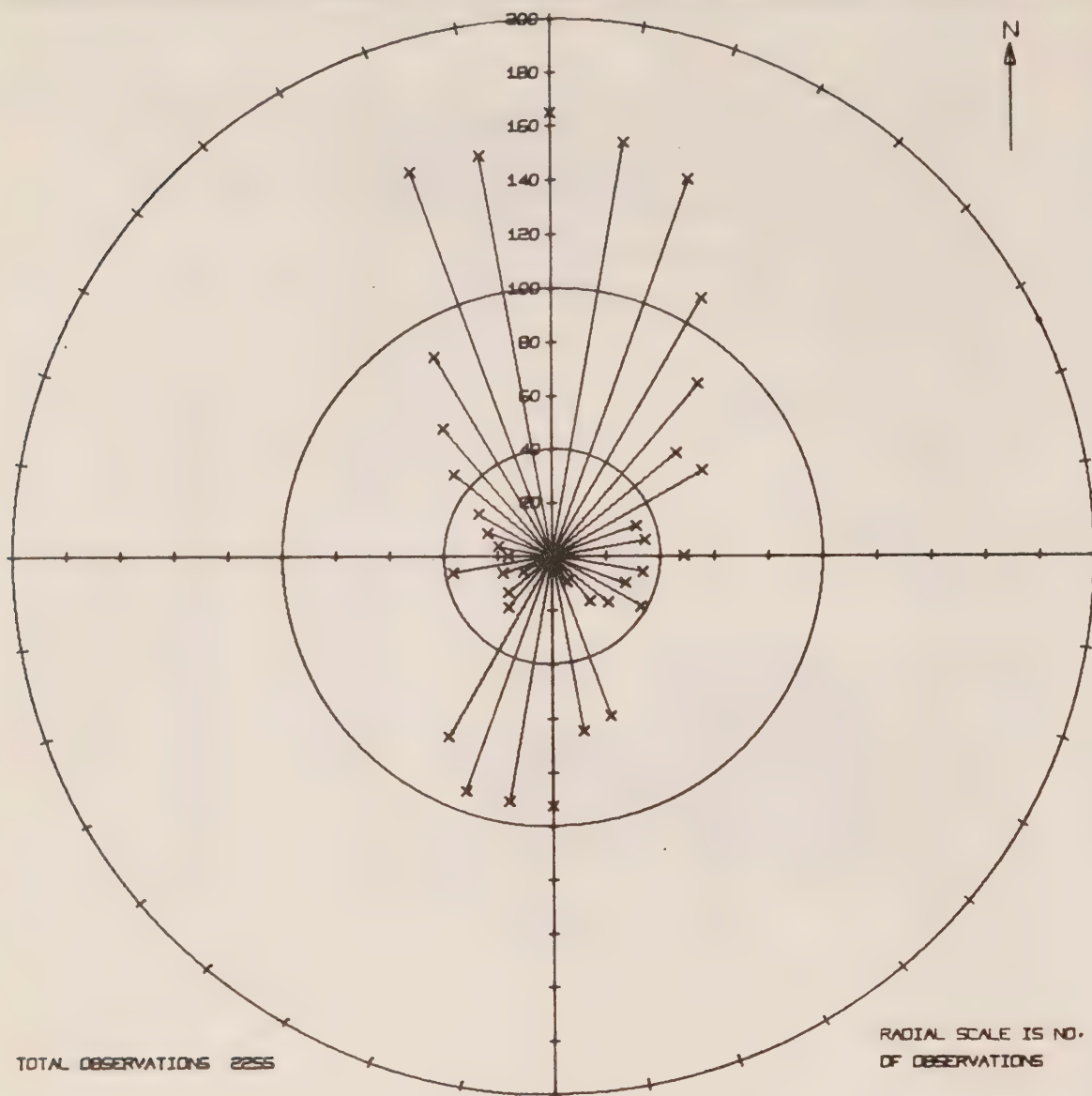
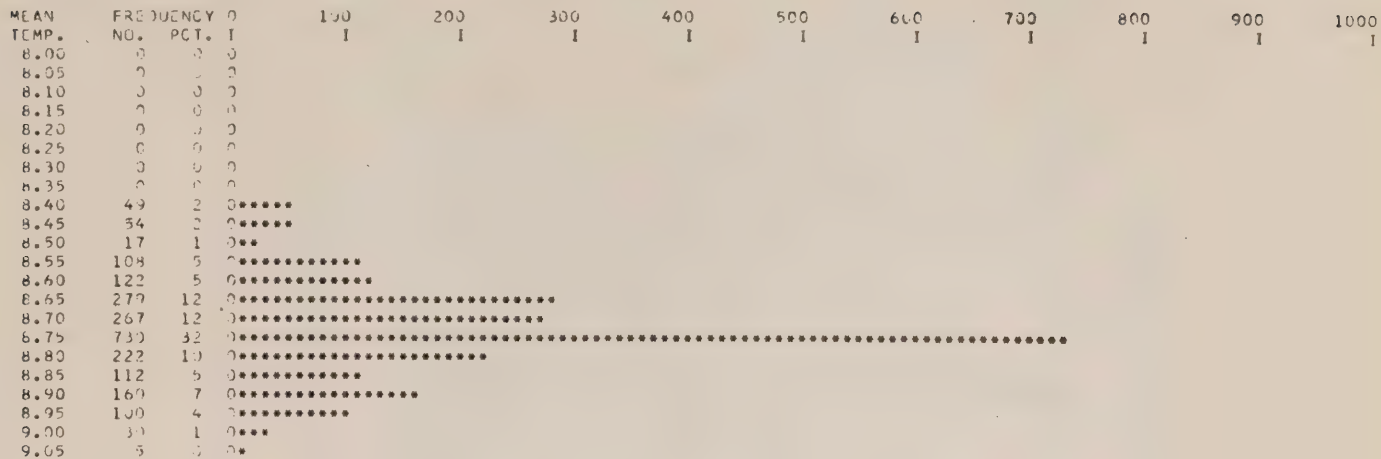


FIG. 27c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 15-DAY PERIOD DURING NOVEMBER 25 THROUGH DECEMBER 11, 1969.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 10.27/25/11/69 TO 2.11/11/12/69



NUMBER OF TEMP. GREATER THAN 9.05 = 0

NUMBER OF OBSERVATIONS = 2255

MEAN TEMP = 8.73 DEG. C.

FIG. 27D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 15-DAY PERIOD DURING NOVEMBER 25 THROUGH DECEMBER 11, 1969.

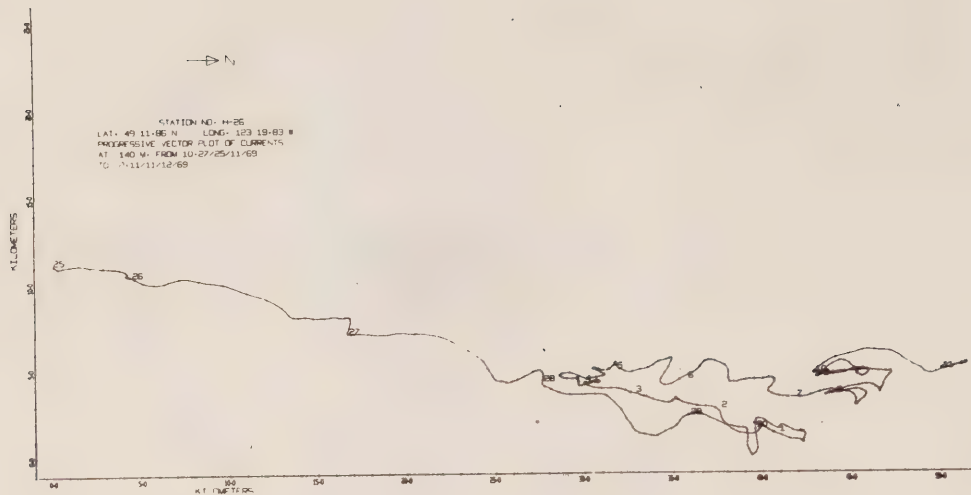


Fig. 27e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 15-day period during November 25 through December 11, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 12.46/ 9/ 1/70 TO 13.47/19/ 2/70

MEAN SPEED	FREQUENCY NO.	PCT.	1	100	200	300	400	500	600	700
0	400	7	0	1	1	1	1	1	1	1
10	125	2	0	1	1	1	1	1	1	1
20	169	3	0	1	1	1	1	1	1	1
30	365	6	0	1	1	1	1	1	1	1
40	344	5	0	1	1	1	1	1	1	1
50	395	10	0	1	1	1	1	1	1	1
60	461	8	0	1	1	1	1	1	1	1
70	565	10	0	1	1	1	1	1	1	1
80	355	6	0	1	1	1	1	1	1	1
90	307	5	0	1	1	1	1	1	1	1
100	375	6	0	1	1	1	1	1	1	1
110	203	3	0	1	1	1	1	1	1	1
120	285	5	0	1	1	1	1	1	1	1
130	144	2	0	1	1	1	1	1	1	1
140	222	4	0	1	1	1	1	1	1	1
150	144	2	0	1	1	1	1	1	1	1
160	120	2	0	1	1	1	1	1	1	1
170	145	2	0	1	1	1	1	1	1	1
180	85	1	0	1	1	1	1	1	1	1
190	91	2	0	1	1	1	1	1	1	1
200	65	1	0	1	1	1	1	1	1	1
210	75	1	0	1	1	1	1	1	1	1
220	37	1	0	1	1	1	1	1	1	1
230	24	0	0	1	1	1	1	1	1	1
240	38	1	0	1	1	1	1	1	1	1
250	36	1	0	1	1	1	1	1	1	1
260	40	1	0	1	1	1	1	1	1	1
270	15	0	0	1	1	1	1	1	1	1
280	15	0	0	1	1	1	1	1	1	1
290	15	0	0	1	1	1	1	1	1	1
300	0	0	0	1	1	1	1	1	1	1
310	10	0	0	1	1	1	1	1	1	1
320	3	0	0	1	1	1	1	1	1	1
330	10	0	0	1	1	1	1	1	1	1
340	5	0	0	1	1	1	1	1	1	1
350	1	0	0	1	1	1	1	1	1	1
360	1	0	0	1	1	1	1	1	1	1

NUMBER OF SPEEDS GREATER THAN 360 = 0

NUMBER OF OBSERVATIONS = 5890

MEAN SPEED = 97 MM/SEC

FIG. 28A, A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 41-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 19, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 12.46/ 9/ 1/70 TO 13.47/19/ 2/70

MEAN DIR.	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400
0	194	3	0	0	0	0	0	0	0	0	0
5	143	2	0	0	0	0	0	0	0	0	0
10	133	2	0	0	0	0	0	0	0	0	0
15	127	2	0	0	0	0	0	0	0	0	0
20	137	2	0	0	0	0	0	0	0	0	0
25	128	2	0	0	0	0	0	0	0	0	0
30	113	2	0	0	0	0	0	0	0	0	0
35	121	2	0	0	0	0	0	0	0	0	0
40	141	2	0	0	0	0	0	0	0	0	0
45	114	2	0	0	0	0	0	0	0	0	0
50	117	2	0	0	0	0	0	0	0	0	0
55	118	2	0	0	0	0	0	0	0	0	0
60	84	1	0	0	0	0	0	0	0	0	0
65	59	1	0	0	0	0	0	0	0	0	0
70	63	1	0	0	0	0	0	0	0	0	0
75	65	1	0	0	0	0	0	0	0	0	0
80	50	1	0	0	0	0	0	0	0	0	0
85	43	1	0	0	0	0	0	0	0	0	0
90	56	1	0	0	0	0	0	0	0	0	0
95	36	1	0	0	0	0	0	0	0	0	0
100	40	1	0	0	0	0	0	0	0	0	0
105	60	1	0	0	0	0	0	0	0	0	0
110	43	1	0	0	0	0	0	0	0	0	0
115	44	1	0	0	0	0	0	0	0	0	0
120	44	1	0	0	0	0	0	0	0	0	0
125	42	1	0	0	0	0	0	0	0	0	0
130	59	1	0	0	0	0	0	0	0	0	0
135	50	1	0	0	0	0	0	0	0	0	0
140	49	1	0	0	0	0	0	0	0	0	0
145	30	1	0	0	0	0	0	0	0	0	0
150	45	1	0	0	0	0	0	0	0	0	0
155	44	1	0	0	0	0	0	0	0	0	0
160	33	1	0	0	0	0	0	0	0	0	0
165	47	1	0	0	0	0	0	0	0	0	0
170	51	1	0	0	0	0	0	0	0	0	0
175	71	1	0	0	0	0	0	0	0	0	0
180	56	1	0	0	0	0	0	0	0	0	0
185	92	2	0	0	0	0	0	0	0	0	0
190	90	2	0	0	0	0	0	0	0	0	0
195	89	2	0	0	0	0	0	0	0	0	0
200	107	2	0	0	0	0	0	0	0	0	0
205	67	1	0	0	0	0	0	0	0	0	0
210	43	1	0	0	0	0	0	0	0	0	0
215	30	1	0	0	0	0	0	0	0	0	0
220	25	1	0	0	0	0	0	0	0	0	0
225	14	0	0	0	0	0	0	0	0	0	0
230	23	0	0	0	0	0	0	0	0	0	0
235	20	0	0	0	0	0	0	0	0	0	0
240	12	0	0	0	0	0	0	0	0	0	0
245	26	0	0	0	0	0	0	0	0	0	0
250	30	1	0	0	0	0	0	0	0	0	0
255	24	0	0	0	0	0	0	0	0	0	0
260	25	0	0	0	0	0	0	0	0	0	0
265	12	0	0	0	0	0	0	0	0	0	0
270	24	0	0	0	0	0	0	0	0	0	0
275	30	1	0	0	0	0	0	0	0	0	0
280	35	1	0	0	0	0	0	0	0	0	0
285	42	1	0	0	0	0	0	0	0	0	0
290	46	1	0	0	0	0	0	0	0	0	0
295	46	1	0	0	0	0	0	0	0	0	0
300	59	1	0	0	0	0	0	0	0	0	0
305	68	1	0	0	0	0	0	0	0	0	0
310	100	2	0	0	0	0	0	0	0	0	0
315	113	2	0	0	0	0	0	0	0	0	0
320	143	2	0	0	0	0	0	0	0	0	0
325	160	3	0	0	0	0	0	0	0	0	0
330	230	4	0	0	0	0	0	0	0	0	0
335	259	4	0	0	0	0	0	0	0	0	0
340	267	5	0	0	0	0	0	0	0	0	0
345	243	4	0	0	0	0	0	0	0	0	0
350	225	4	0	0	0	0	0	0	0	0	0
355	201	3	0	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 5890

FIG. 28b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 41-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 19, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 12.46/9/ 1/70 TO 13.47/19/ 2/70

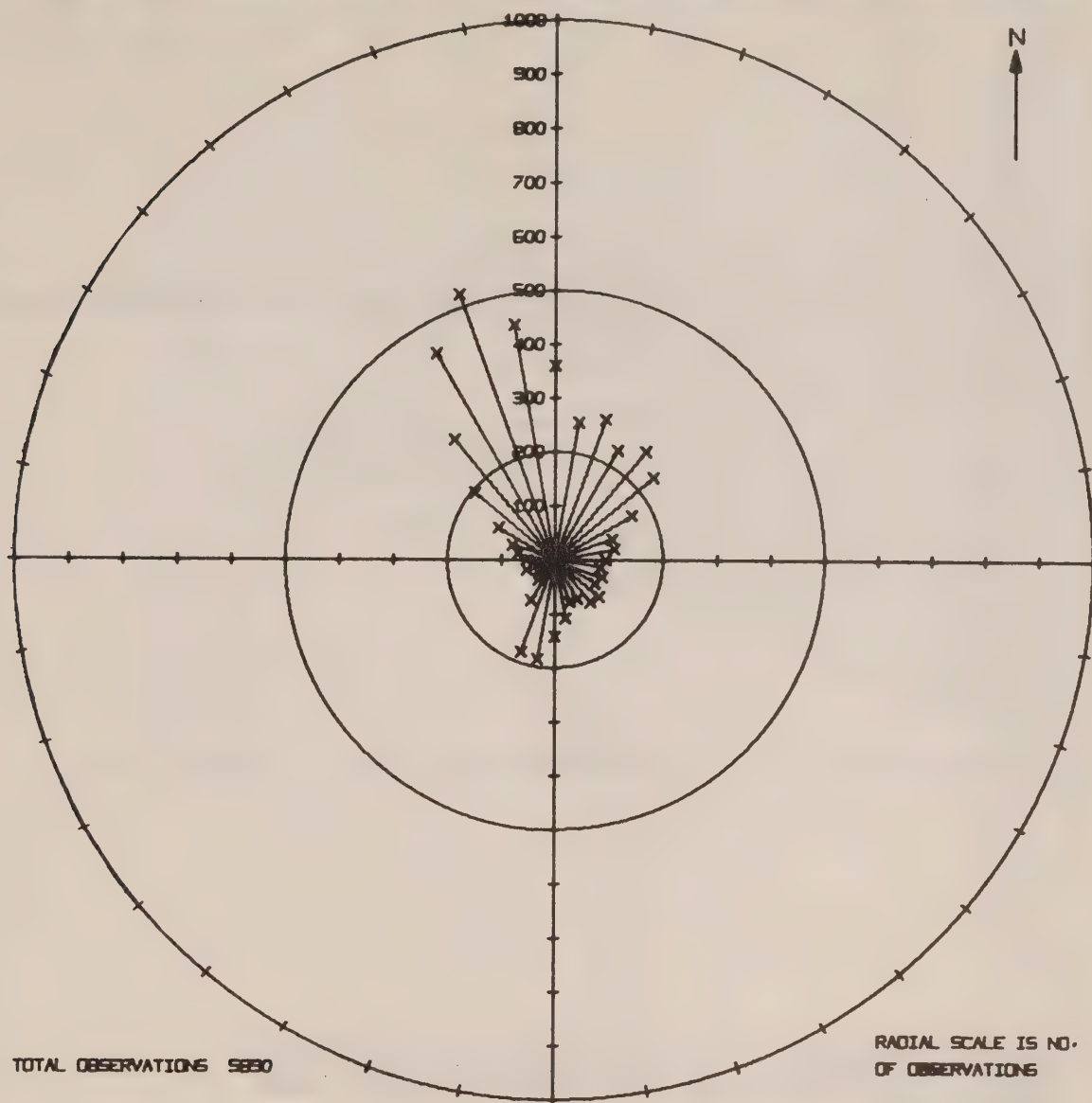
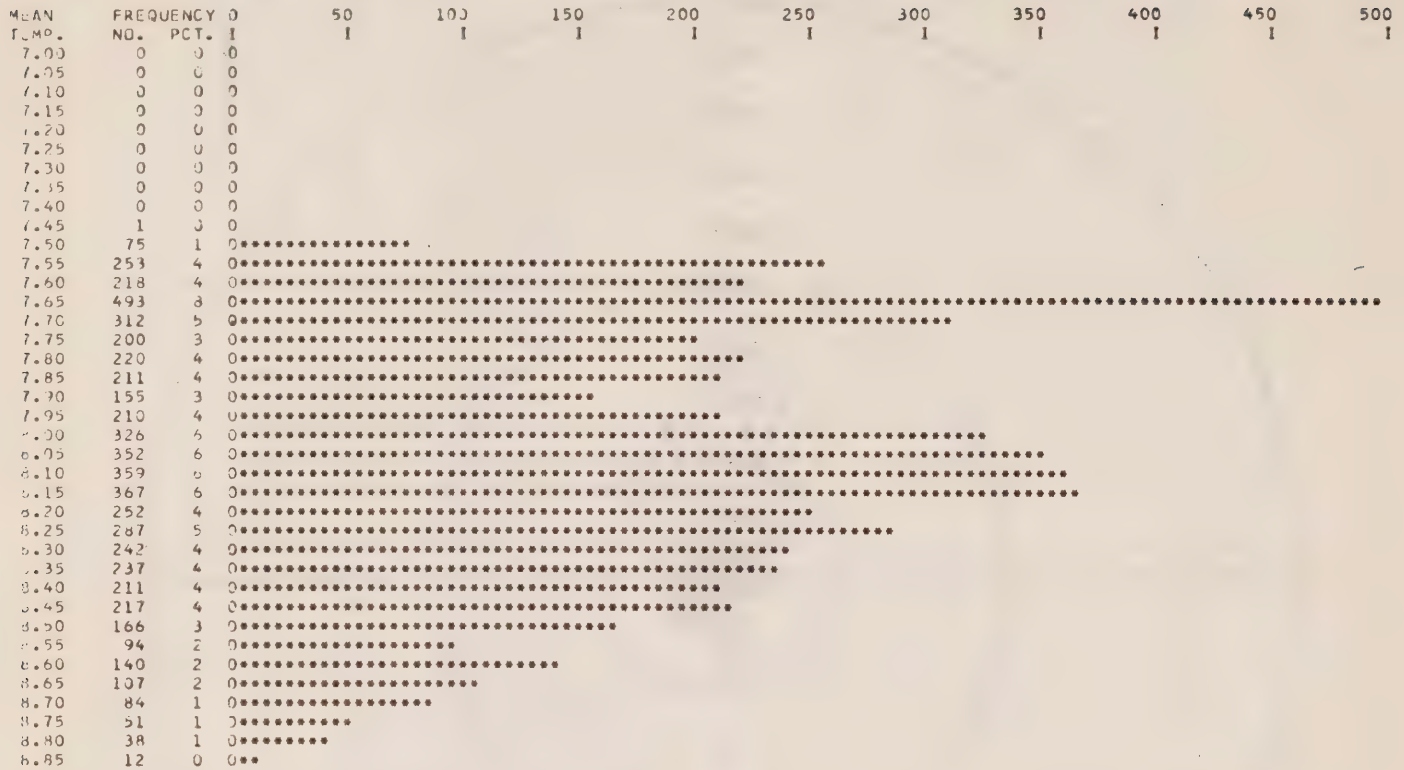


FIG. 28c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 41-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 19, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 12.46/ 9/ 1/70 TO 13.47/19/ 2/70



NUMBER OF TEMP. GREATER THAN 8.85 = 0 NUMBER OF OBSERVATIONS = 5890 MEAN TEMP = 8.06 DEG. C.

FIG. 28D. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 41-DAY PERIOD DURING JANUARY 9 THROUGH FEBRUARY 19, 1970.



Fig. 28e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 41-day period during January 9 through February 19, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.36 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 15.48/19/ 2/70 TO 10.13/25/ 3/70

MEAN SPEED	FREQUENCY NO.	PCT. I	50 I	100 I	150 I	200 I	250 I	300 I	350 I	400 I	450 I	500 I
0	0	0	0									
10	147	3	0	*****								
20	80	2	0	*****								
30	88	2	0	*****								
40	261	5	0	*****								
50	204	4	0	*****								
60	277	6	0	*****								
70	180	4	0	*****								
80	296	6	0	*****								
90	260	5	0	*****								
100	266	5	0	*****								
110	400	8	0	*****								
120	250	5	0	*****								
130	312	6	0	*****								
140	218	5	0	*****								
150	237	5	0	*****								
160	121	3	0	*****								
170	154	3	0	*****								
180	197	4	0	*****								
190	124	3	0	*****								
200	169	3	0	*****								
210	89	2	0	*****								
220	121	3	0	*****								
230	79	2	0	*****								
240	61	1	0	*****								
250	67	1	0	*****								
260	34	1	0	*****								
270	30	1	0	*****								
280	26	1	0	*****								
290	33	1	0	*****								
300	23	0	0	*****								
310	10	0	0	0*								
320	11	0	0	0*								
330	4	0	0	0*								
340	3	0	0	0*								
350	4	0	0	0*								
360	2	0	0									

NUMBER OF SPEEDS GREATER THAN 360 = 0

NUMBER OF OBSERVATIONS = 4838

MEAN SPEED = 122 MM/SEC

FIG. 29a. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 15.46/19/ 2/70 TO 19.13/25/ 3/70



NUMBER OF OBSERVATIONS = 4836

FIG. 29B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 15.48/19/ 2/70 TO 10.13/25/ 3/70

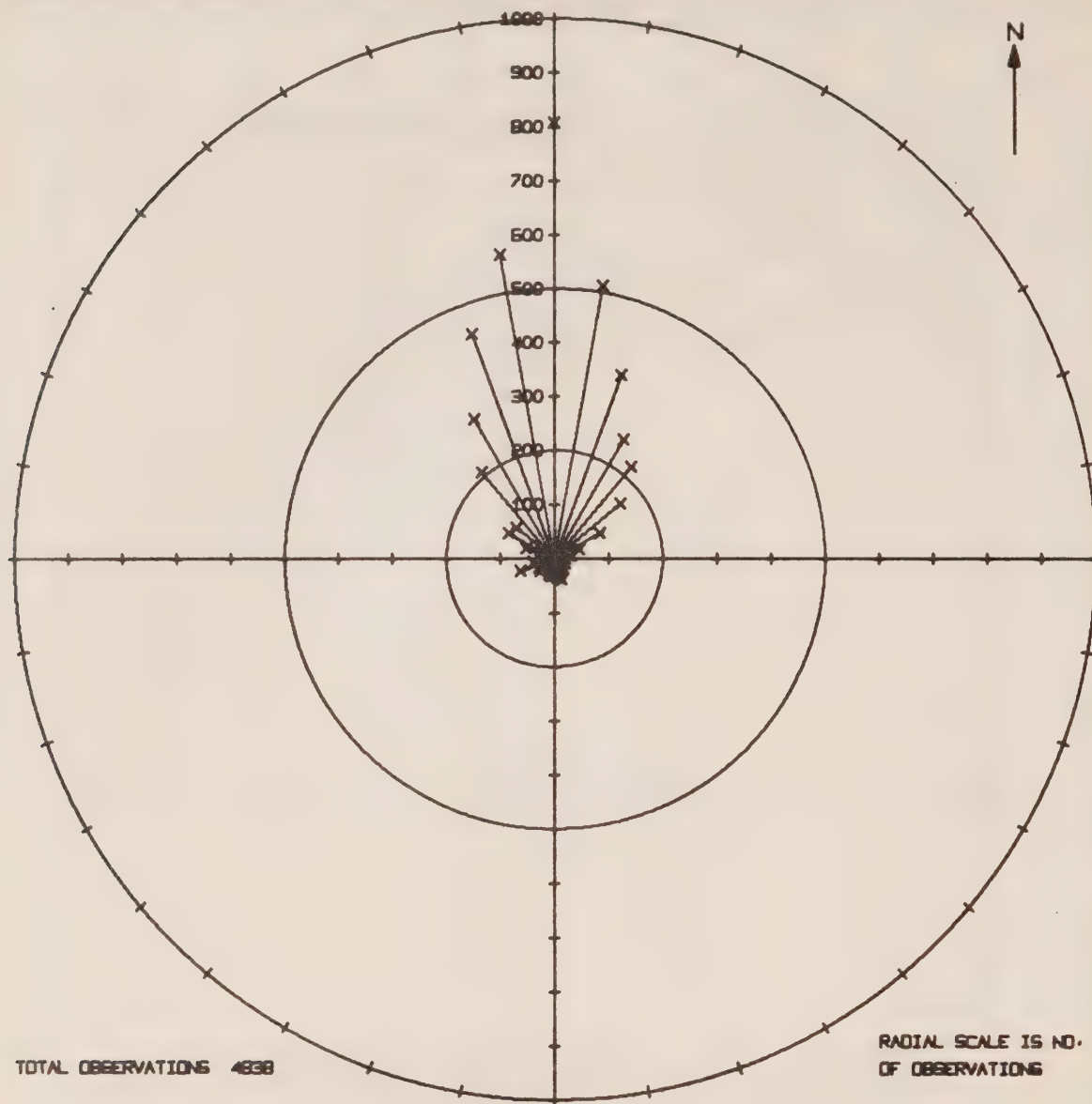


FIG. 29c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 15.48/19/ 2/70 TO 10.13/25/ 3/70

MEAN TEMP.	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I	800 I	900 I	1000 I
7.00	0	0	0	0	0	0	0	0	0	0	0	0
7.05	0	0	0	0	0	0	0	0	0	0	0	0
7.10	0	0	0	0	0	0	0	0	0	0	0	0
7.15	0	0	0	0	0	0	0	0	0	0	0	0
7.20	0	0	0	0	0	0	0	0	0	0	0	0
7.25	0	0	0	0	0	0	0	0	0	0	0	0
7.30	0	0	0	0	0	0	0	0	0	0	0	0
7.35	0	0	0	0	0	0	0	0	0	0	0	0
7.40	0	0	0	0	0	0	0	0	0	0	0	0
7.45	0	0	0	0	0	0	0	0	0	0	0	0
7.50	0	0	0	0	0	0	0	0	0	0	0	0
7.55	0	0	0	0	0	0	0	0	0	0	0	0
7.60	0	0	0	0	0	0	0	0	0	0	0	0
7.65	456	9	0	0	0	0	0	0	0	0	0	0
7.70	600	12	0	0	0	0	0	0	0	0	0	0
7.75	841	17	0	0	0	0	0	0	0	0	0	0
7.80	558	12	0	0	0	0	0	0	0	0	0	0
7.85	424	9	0	0	0	0	0	0	0	0	0	0
7.90	329	7	0	0	0	0	0	0	0	0	0	0
7.95	276	5	0	0	0	0	0	0	0	0	0	0
8.00	233	5	0	0	0	0	0	0	0	0	0	0
8.05	165	3	0	0	0	0	0	0	0	0	0	0
8.10	182	4	0	0	0	0	0	0	0	0	0	0
8.15	203	4	0	0	0	0	0	0	0	0	0	0
8.20	134	3	0	0	0	0	0	0	0	0	0	0
8.25	135	3	0	0	0	0	0	0	0	0	0	0
8.30	126	3	0	0	0	0	0	0	0	0	0	0
8.35	65	1	0	0	0	0	0	0	0	0	0	0
8.40	62	1	0	0	0	0	0	0	0	0	0	0
8.45	33	1	0	0	0	0	0	0	0	0	0	0
8.50	16	0	0	0	0	0	0	0	0	0	0	0

NUMBER OF TEMP. GREATER THAN 8.50 = 0

NUMBER OF OBSERVATIONS = 4636

MEAN TEMP = 7.89 DEG. C.

FIG. 29d. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 34-DAY PERIOD DURING FEBRUARY 19 THROUGH MARCH 25, 1970.

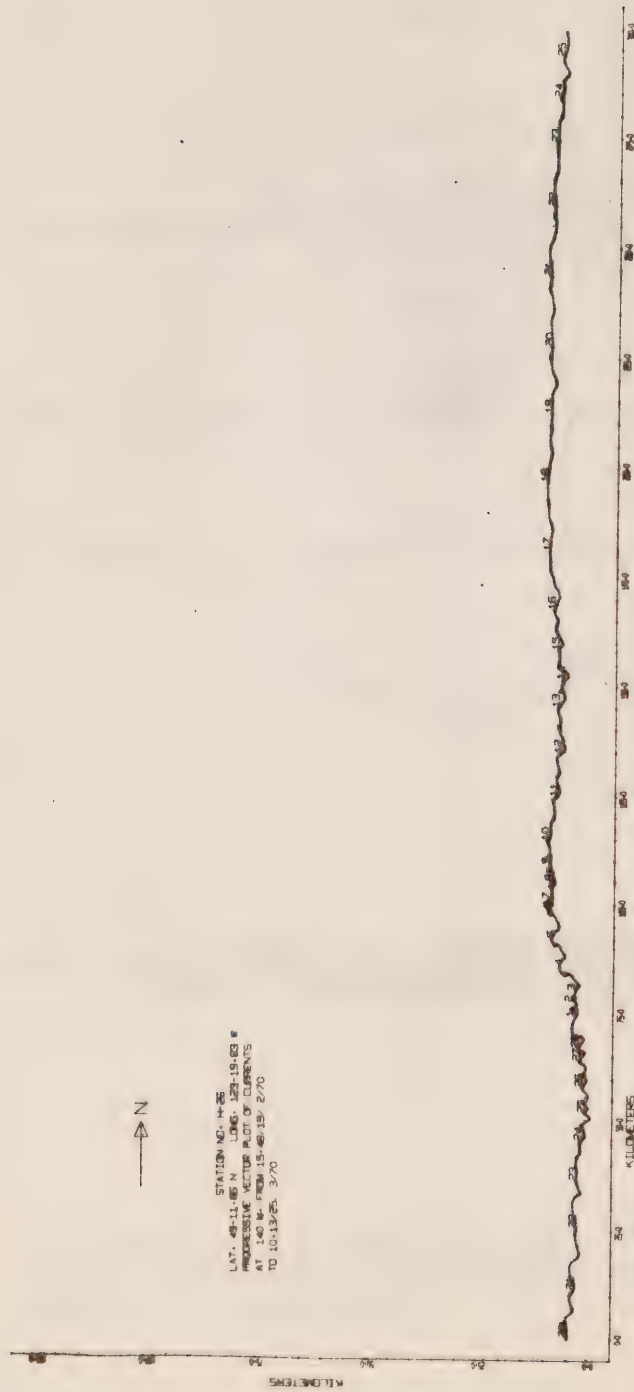


Fig. 29e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 34-day period during February 19 through March 25, 1970. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 13.13/25/ 3/70 TO 15. 6/27/ 4/70

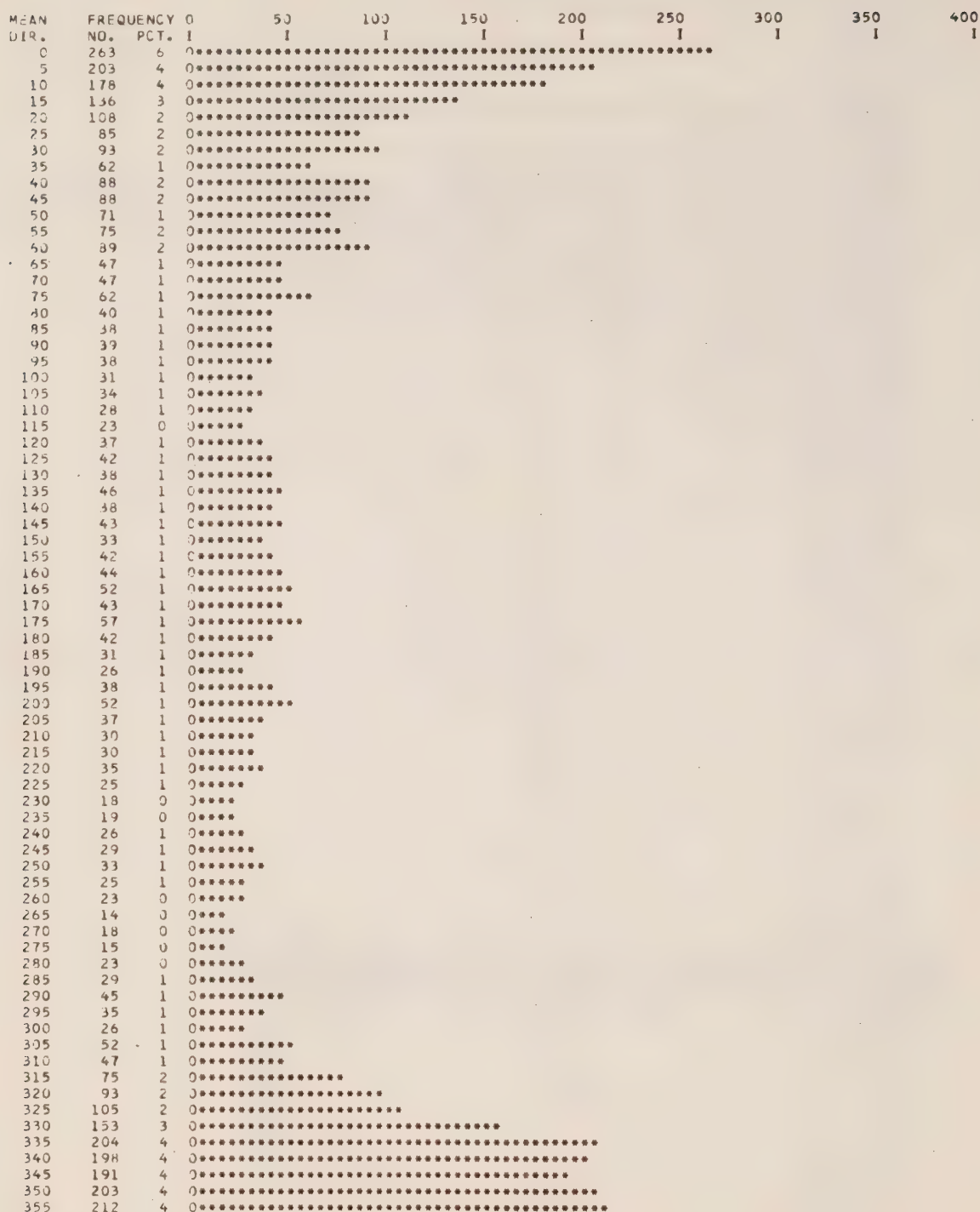
MEAN SPEED	FREQUENCY NO.	PCT.	0	50	100	150	200	250	300	350	400	450	500
			I	I	I	I	I	I	I	I	I	I	I
0	0	0	0										
10	329	7	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	118	2	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	133	3	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	264	6	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
50	246	5	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60	451	10	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
70	305	6	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
80	408	9	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
90	272	6	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
100	245	5	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
110	329	7	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
120	188	4	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
130	270	6	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
140	151	3	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
150	186	4	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
160	100	2	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
170	100	2	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
180	139	3	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
190	71	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
200	115	2	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
210	70	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
220	86	2	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
230	49	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
240	37	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
250	26	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
260	7	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
270	7	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
280	3	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
290	7	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
300	6	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
310	1	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
320	2	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NUMBER OF SPEEDS GREATER THAN 300 = 0 NUMBER OF OBSERVATIONS = 4738 MEAN SPEED = 99 MM/SEC

FIG. 30A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING MARCH 25 THROUGH APRIL 27, 1970. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. M-26 LAT. 49-11.80 N LONG. 123-19.83 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 140 METRES
OBSERVATION PERIOD, FROM 13.13/25/ 3/70 TO 15. 6/27/ 4/70



NUMBER OF OBSERVATIONS = 4738

FIG. 30b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING MARCH 25 THROUGH APRIL 27, 1970.

STATION NO. H-26 LAT. 49-11.86 N LONG. 123-19.83 W
DIRECTION HISTOGRAM FOR CURRENTS AT 140 M. FROM 13-13/25/ 3/70 TO 15- 6/27/ 4/70

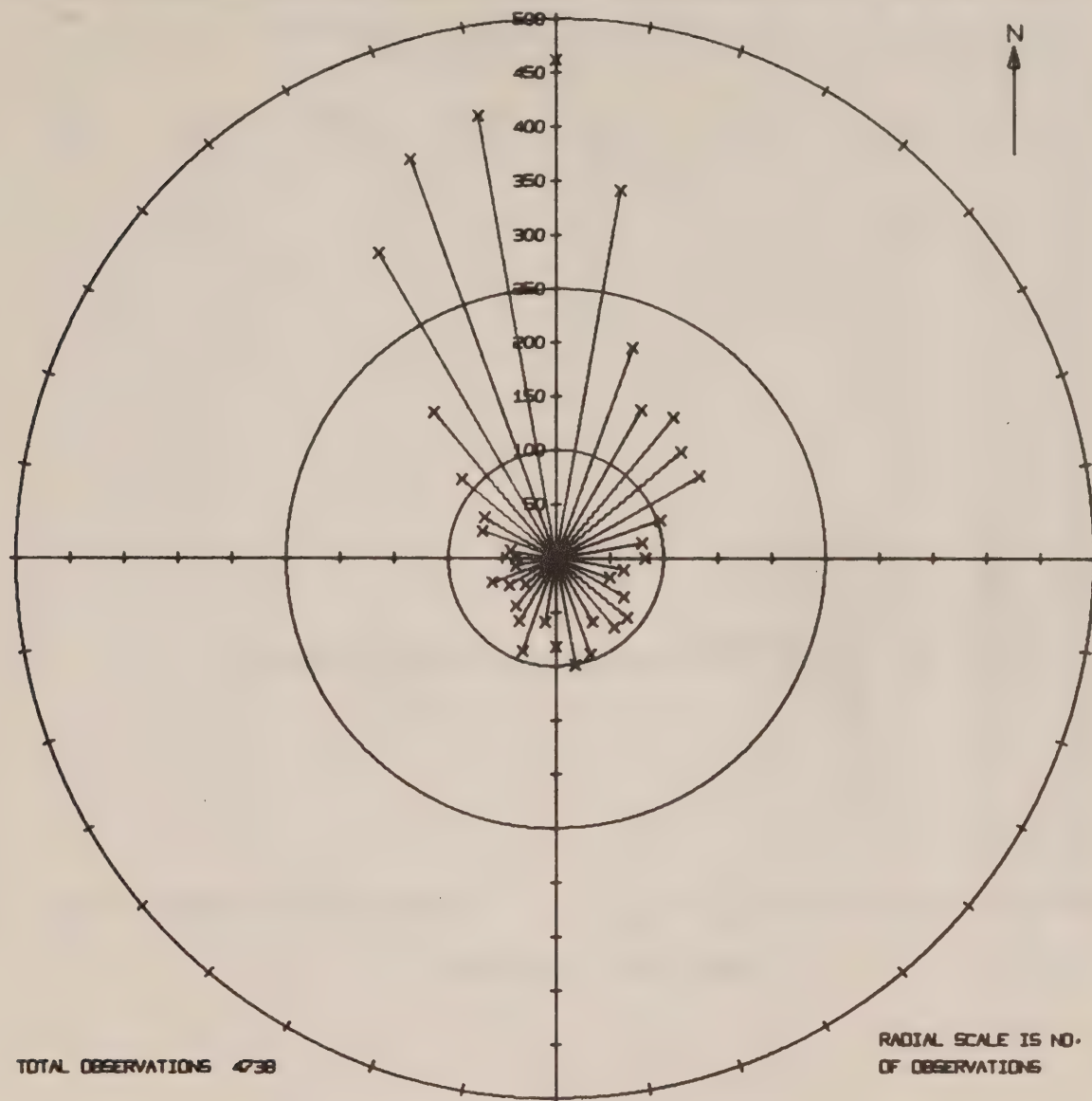


FIG. 30c. A HISTOGRAM OF DIRECTION (°TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10°, BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING MARCH 25 THROUGH APRIL 27, 1970.

STATION NO. H-26 LAT. 49-11.86' N LONG. 123-19.83' W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 140 METERS
OBSERVATION PERIOD, FROM 13.13/25/ 3/70 TO 15. 6/27/ 4/70

TEMP.	FREQUENCY NO.	PCT. I	500 I	1000 I	1500 I	2000 I	2500 I	3000 I
7.00	0	0 0						
7.05	0	0 0						
7.10	0	0 0						
7.15	0	0 0						
7.20	0	0 0						
7.25	0	0 0						
7.30	0	0 0						
7.35	0	0 0						
7.40	0	0 0						
7.45	0	0 0						
7.50	0	0 0						
7.55	0	0 0						
7.60	0	0 0						
7.65	0	0 0						
7.70	0	0 0						
7.75	0	0 0						
7.80	65	1 0*						
7.85	301	6 0*****						
7.90	382	8 0*****						
7.95	284	6 0*****						
8.00	114	2 0**						
8.05	687	15 0*****						
8.10	2319	49 0*****						
8.15	324	7 0*****						
8.20	107	2 0**						
8.25	78	2 0**						
8.30	40	1 0*						
8.35	16	0 0						
8.40	4	0 0						
8.45	6	0 0						
8.50	5	0 0						
8.55	6	0 0						

NUMBER OF TEMP. GREATER THAN 8.55 = 0

NUMBER OF OBSERVATIONS = 4738

MEAN TEMP = 8.06 DEG. C.

FIG. 30b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 33-DAY PERIOD DURING MARCH 25 THROUGH APRIL 27, 1970.

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**SUMMARY OF OCEANOGRAPHIC RECORDS
OBTAINED FROM MOORED INSTRUMENTS
IN THE STRAIT OF GEORGIA — 1968-1970**
Current Velocity
from Stations F-11, M-10 and I-31

S. Tabata, J.A. Stickland



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MARINE SCIENCES BRANCH, PACIFIC REGION
PACIFIC MARINE SCIENCE REPORT NO. 72-10

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by

S. Tabata and J.A. Stickland

Victoria, B.C.
Marine Sciences Branch, Pacific Region
Environment Canada

May, 1972

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INTRODUCTION

The waters of the Strait of Georgia have been the subject of many oceanographic studies for more than half a century. The earlier studies of the region consisted mainly of physical, chemical and biological oceanographic descriptions of the waters and some of the main factors affecting the properties of the waters therein. The studies vary, in scope, from a brief initial description of the waters by Fraser and Cameron (1916) and a more detailed work by Hutchinson and Lucas (1931) and to a more complete treatment by Waldichuk (1957), to name a few.

In spite of the number of oceanographic studies made on these waters there was a notable lack of reliable information of the surface and subsurface circulation in the Strait. In order to relieve this deficiency, the Pacific Oceanographic Group embarked on a limited program of current velocity observations in the central portion of the Strait of Georgia. The results of which have already been reported (Giovando and Tabata, 1970) and a series of velocity profile measurements from anchored vessels, the results of which have also been reported (Tabata, Stickland, Wong and Giovando, 1970 (a); 1970(b); 1970(c)).

In recent years the marine technology associated with automated oceanographic observations from moored instruments has advanced to the stage where it is now possible to obtain reliable data from unattended instruments for periods exceeding one month. The present series of observations to be reported here are based on data obtained from such instruments.

The primary objective of the present program of observations is to obtain current velocity records at sufficiently high frequency and of sufficient length so that it would be possible to examine the spectrum of the variability of current velocities in the frequency band between 1 cycle and 10^{-3} cycle per hour (period of few hours to few months approximately), at a representative area of the central Strait. Such data would provide, in addition to basic scientific information, solid background material that would be useful in a variety of applied oceanographic studies such as those associated with pollution and fisheries. As most of the instruments employed recorded temperatures of the water as well as current velocities, they too are reported.

A report describing the observational program, performances of current meters used, mooring technique, computer data-processing method, etc. has already been published in the Technical Report Series of the Fisheries Research Board of Canada (Tabata, Stickland and de Lange Boom, 1971). The summaries of observations obtained from Stations H-06, H-16 and H-26 have already been published in Pacific Marine Science Reports No. 72-7, 72-8 and 72-9 respectively (Tabata and Stickland, 1972).

The present report comprises the summary of current velocity measurements obtained from Stations F-11, M-10 and I-31. It is the fifth of a series of reports associated with the program of oceanographic observations from moored instruments in the Strait of Georgia to be issued.

The summary contains:

- 1) histogram of current speed
- 2) histogram of current direction
- 3) histogram of current direction in polar form
{for Station F-11 (50m depth) and Station I-31
(7m depth) *only*}
- 4) histogram of temperature {for Station I-31
(7m depth) *only*}
- 5) progressive vector diagram of current velocities

Local standard time, Pacific Standard Time (P.S.T.), is used throughout (time zone + 8).

LOCATION OF STATIONS

The previous reports summarized the observations obtained from a line of 3 stations (H-06, H-16, H-26) placed 10 kilometres (km.) apart between Valdes Island to the west and Point Grey to the east (Fig. 1). Stations F-11 and M-10 were established for the purpose of conducting mooring trials and instrument performance evaluation while Station I-31 was established as the result of an accident. The mooring which was originally placed at Station H-26 was dragged 4 miles to the north of the location of Station I-31 by a tug boat with tow.

The positions and depths of the stations are:

Station F-11	Latitude 49°03.00'N
	Longitude 123°02.60'W
	Depth 300m

Station M-10	Latitude 49°17.28'N
	Longitude 123°44.50'W
	Depth 293m

Station I-31	Latitude 49°15.83'N
	Longitude 123°18.45'W
	Depth 110m

COMMENTS

Station F-11

Subsurface-Buoy Mooring

August 14 through October 2, 1968.

Instrument Depth: 50m	Plessey Current Meter (Serial No. 187) Due to malfunctioning of instrument only 26½ days of data obtained. Quality of data somewhat dubious.
200m	Geodyne* Current Meter (Serial No. M-183) 49-day period of observations.

Station M-10

October 17 through November 28, 1968.

Instrument Depth: 50m	Plessey Current Meter (Serial No. 110) Due to malfunctioning of instrument only several hours of data obtained and therefore not reported.
200m	Geodyne* Current Meter (Serial No. M-187) 42-day period of observations. Instrument ceased to operate after 42 days of operation due to deterioration of battery

Station I-31

Taut-Rope Mooring

July 24 through July 28, 1969.

Instrument Depth: 7m	Aanderaa Current Meter (Serial No 102) 3½-day period of observations available. Observations recorded here result of mooring being dragged here from Station H-26. Depth here 52m less than at Station H-26. Subsurface buoy placed 7m above instrument at 50m depth at Station H-26. Subsurface buoy floating at surface when retrieved at Station I-31. Total length of mooring cable between subsurface buoy and anchor was 119m which is only 9m greater than the depth at Station I-31. Therefore for all practical purposes mooring here considered to be taut-rope mooring.
----------------------	--

* It is to be noted that while the Plessey and Aanderaa (Bergen) Current Meters used in the present program were made to sample every 5 and 10 minutes respectively, the Geodyne Current Meter was set to "burst sample" every 15 minutes (that is, every 15 minutes it recorded 15 samples at 5-second intervals).

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1958. Drift bottle observations in the Strait of Georgia. J. Fish. Res. Bd. Canada 15: 1065-1102.

ACKNOWLEDGEMENT

The acquisition of , and the processing of oceanographic data obtained from moored instruments require the assistance and cooperation of many individuals and groups. We acknowledge the assistance rendered by the staff of the Nanaimo Biological Station of the Fisheries Research Board of Canada, of the Pacific Oceanographic Group of the Marine Sciences Branch (now at the Pacific Environment Institute at West Vancouver B.C.), of the men of the research vessels, C.G.S. *Parizeau* (M.S.B.), C.G.S. *Vector* (M.S.B.) and C.G.S. *A.P. Knight* (F.R.B.C.). Individuals associated with the above were duly acknowledged in our first report. Since the publication of the first report in 1971, a number of people have assisted in the computer-processing of data and in the preparation of illustrations. We appreciate the generous assistance given by Mr. J.A.C. Thomson and Mrs. A. Sandnes of the Computing Centre at the Nanaimo Biological Station, Messrs. B. de Lange Boom and I. Daniel who processed the data, Miss T.A. Findlay who prepared the illustrations, and Mr. C. Morley of the Nanaimo Biological Station and Mr. R. Banyard of the Canadian Hydrographic Service of the Marine Sciences Branch who photo-reproduced all the illustrations. We owe our thanks to Miss M. Dyer for organizing and making the preparatory work essential to the publication of this report.



Fig. 1. Location of stations in the central Strait of Georgia where observations were made. The records described in this report were obtained at Stations F-11, M-10 and I-31.

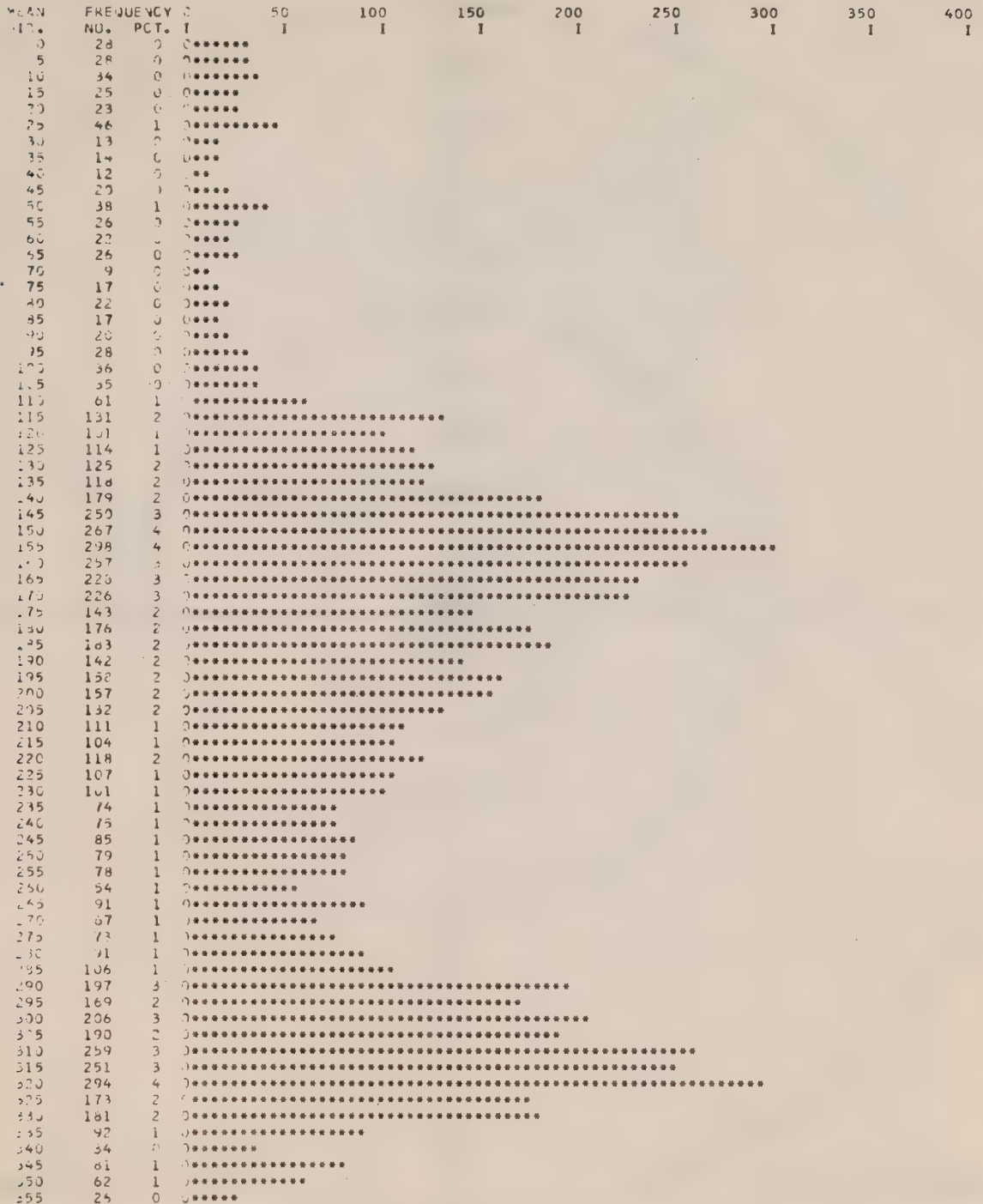
STATION NO. F-11 LAT. 49- 3.12 N LONG. 123-25.88 W
 HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 50 METRES
 OBSERVATION PERIOD, FROM 14.50/14/ 8/68 TO 1.15/10/ 9/68

CLASS MID	FREQUENCY NO.	PCT. I	100 I	200 I	300 I	400 I	500 I	600 I	700 I
0	523	7	*****						
10	257	2	*****						
20	213	3	*****						
30	7	0							
40	239	4	*****						
50	317	4	*****						
60	285	4	*****						
70	315	4	*****						
80	340	4	*****						
90	1	0							
100	343	5	*****						
110	346	5	*****						
120	311	4	*****						
130	319	4	*****						
140	316	4	*****						
150	1	0							
160	343	5	*****						
170	319	4	*****						
180	312	4	*****						
190	319	5	*****						
200	284	3	*****						
210									
220	287	4	*****						
230	212	3	*****						
240	234	3	*****						
250	185	2	*****						
260	186	2	*****						
270	0	0							
280	151	2	*****						
290	107	1	*****						
300	57	1	*****						
310	77	1	*****						
320	73	1	*****						
330	0	0							
340	44	1	*****						
350	35	0	*****						
360	34	0	****						
370	17	0	****						
380	26	0	****						
390									
400	11	0	*						
410	11	0	*						
420	4	0	*						
430	5	0	*						
440	4	0							
450									
460	3	0							
470		0							
480									
490	3	0							
500	5	0	*						
510	0	0							
520	1	0							
530	0	0							
540	0	0							

FIG. 2A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 5-MINUTE INTERVALS OVER 26 1/2-DAY PERIOD DURING AUGUST 14 THROUGH SEPTEMBER 10, 1968. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. F-11 LAT. 49- 3.12 N LONG. 123-25.88 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 50 METRES
OBSERVATION PERIOD, FROM 14.50/14/ 8/68 TO 1.15/10/ 9/68



NUMBER OF OBSERVATIONS = 7614

FIG. 2B. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 5-MINUTE INTERVALS OVER 26 1/2-DAY PERIOD DURING AUGUST 14 THROUGH SEPTEMBER 10, 1968.

STATION NO. F-11 LAT. 49- 3.12 N LONG. 123-25.88 W
DIRECTION HISTOGRAM FOR CURRENTS AT 50 M. FROM 14.50/14/ 8/68 TO 1.15/10/ 9/68

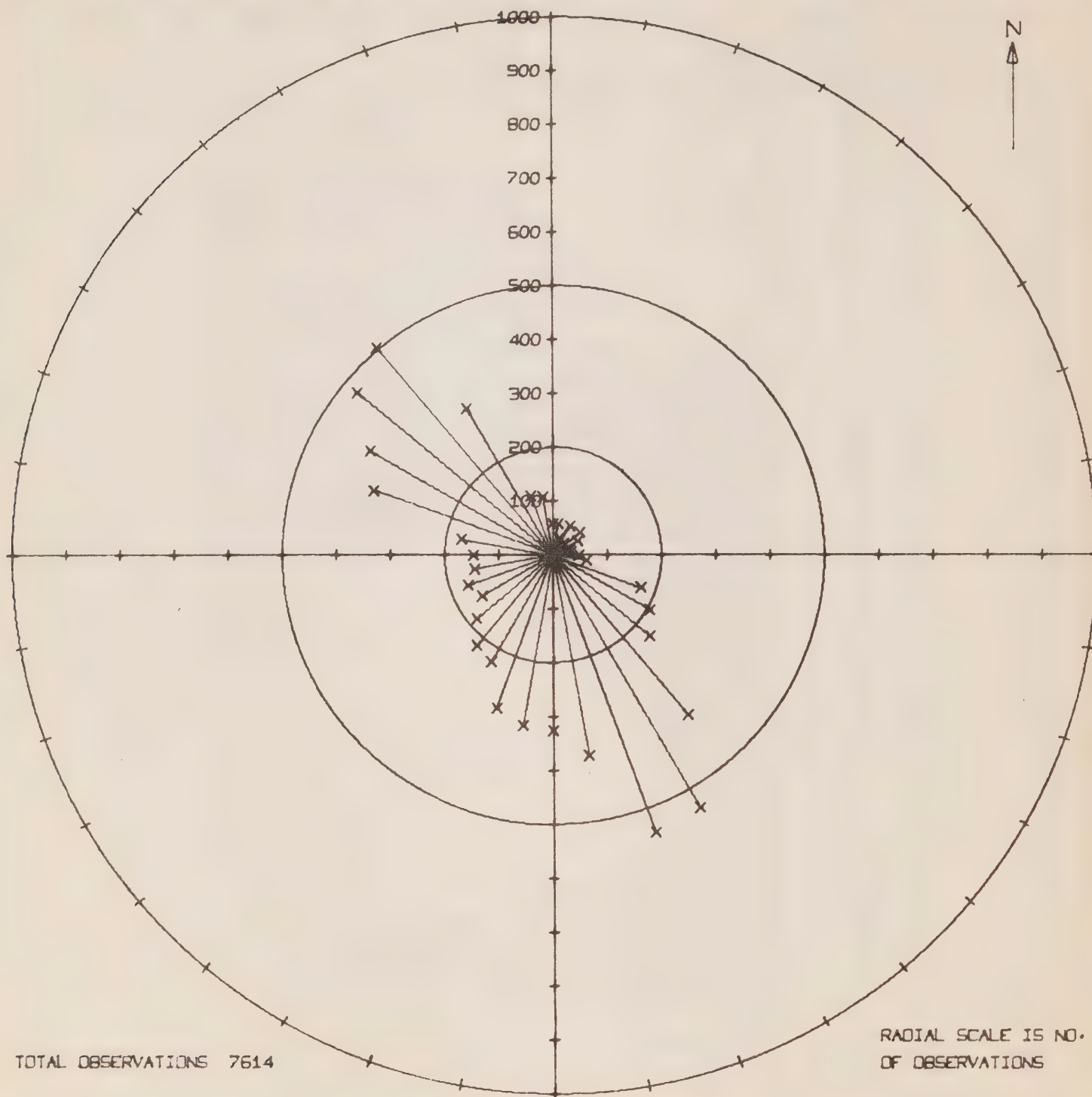


FIG. 2b. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 5-MINUTE INTERVALS OVER 26 1/2-DAY PERIOD DURING AUGUST 14 THROUGH SEPTEMBER 10, 1968.

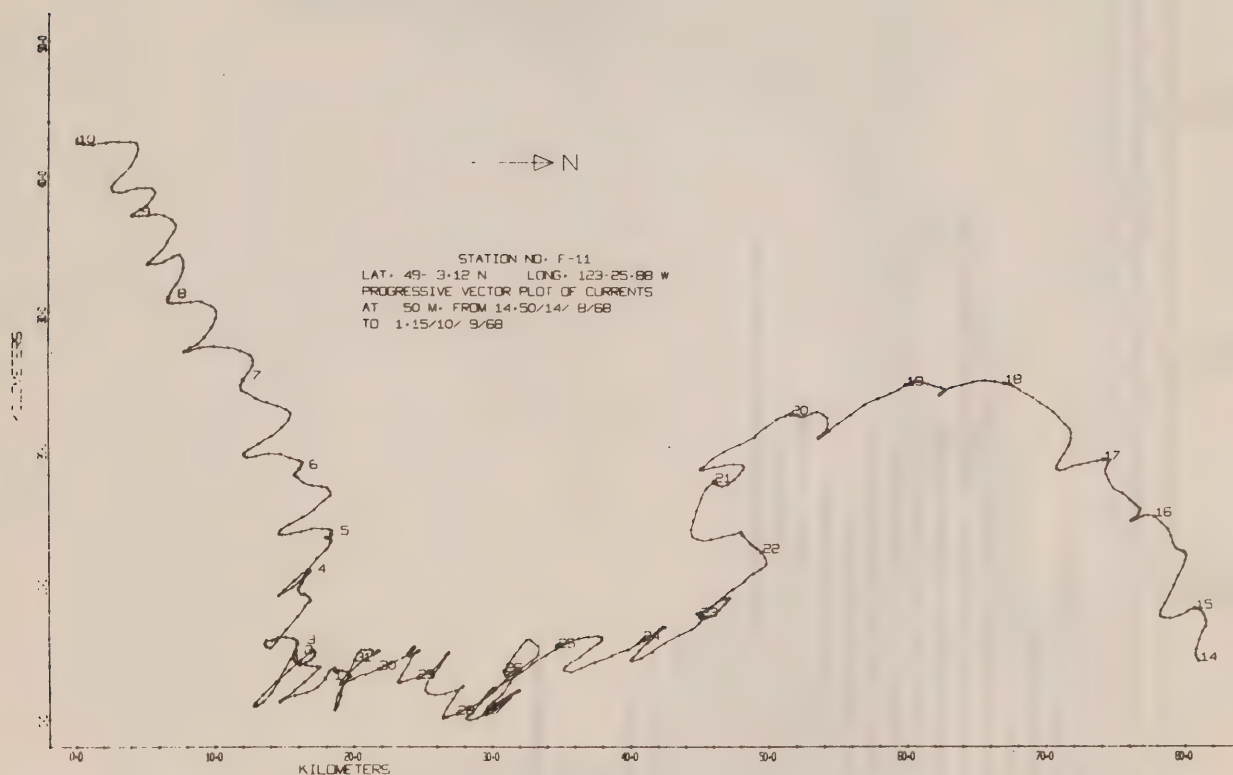


Fig. 2c. A progressive vector diagram constructed from cumulative values of north-south and east-west components of current velocity from records obtained at 5-minute intervals over 26 1/2-day period during August 14 through September 10, 1968. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

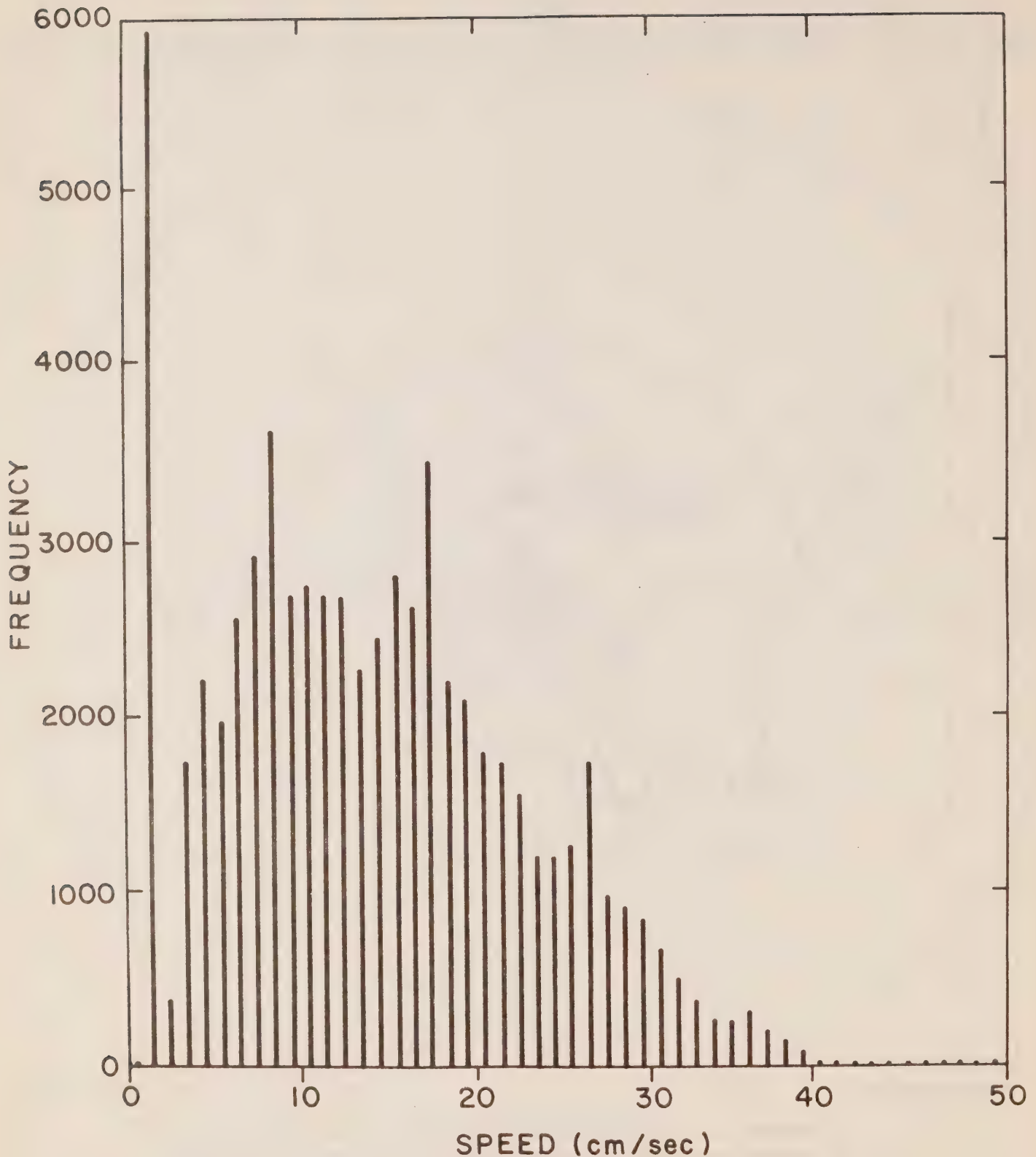


Fig. 3a. Station F-11 at 200m. depth. A histogram of speed (cm/sec), with class interval of 1 cm/sec from records obtained at 15-minute intervals over 49-day period during August 14 through October 2, 1968. Speed less than or equal to 1 cm/sec is considered to be "zero speed".

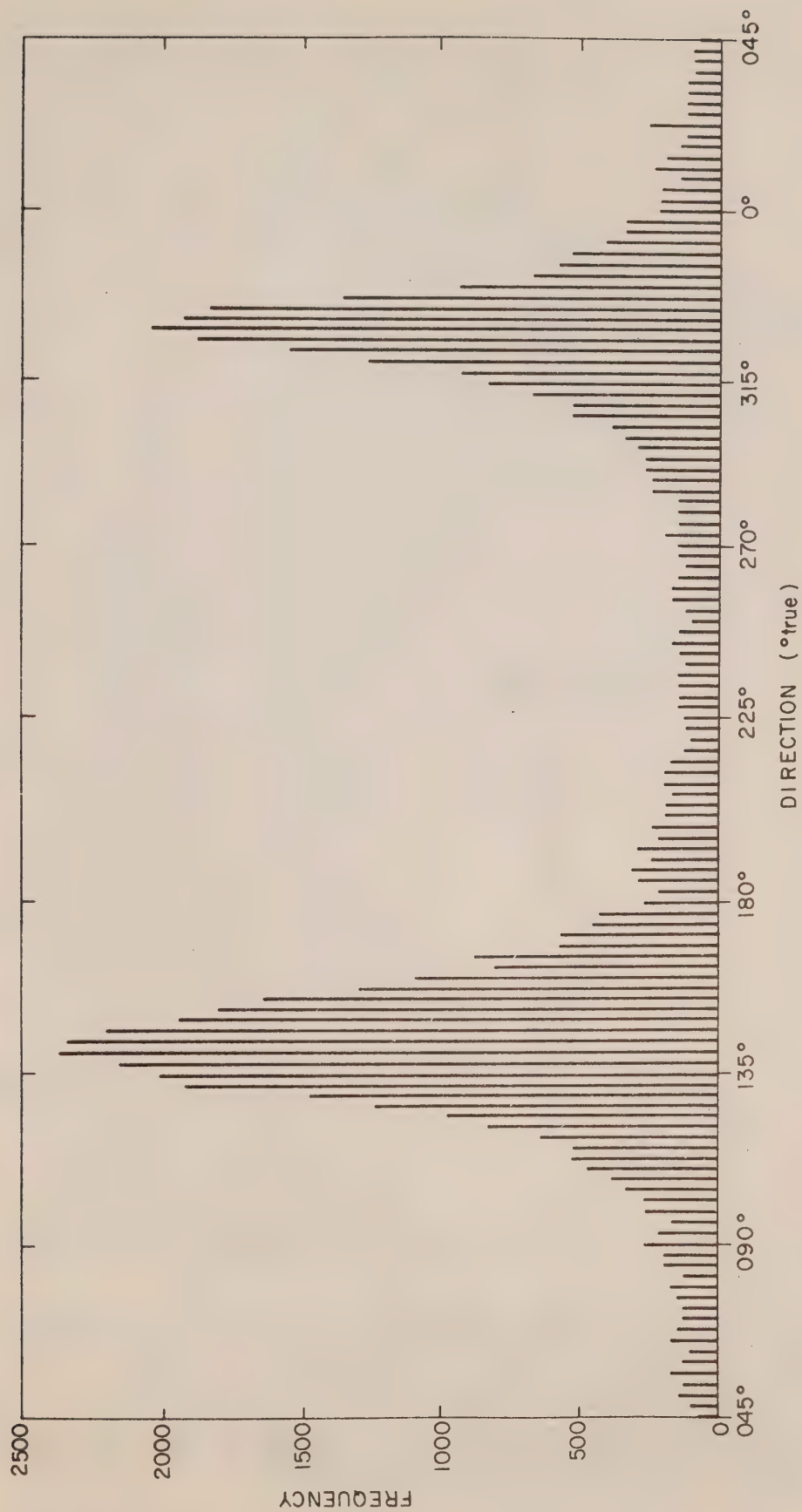


Fig. 3b. Station F-11 at 200m depth. A histogram of direction ($^{\circ}$ true), with class interval of 3° , from records obtained at 15-minute intervals over 49-day period during August 14 through October 2, 1968.

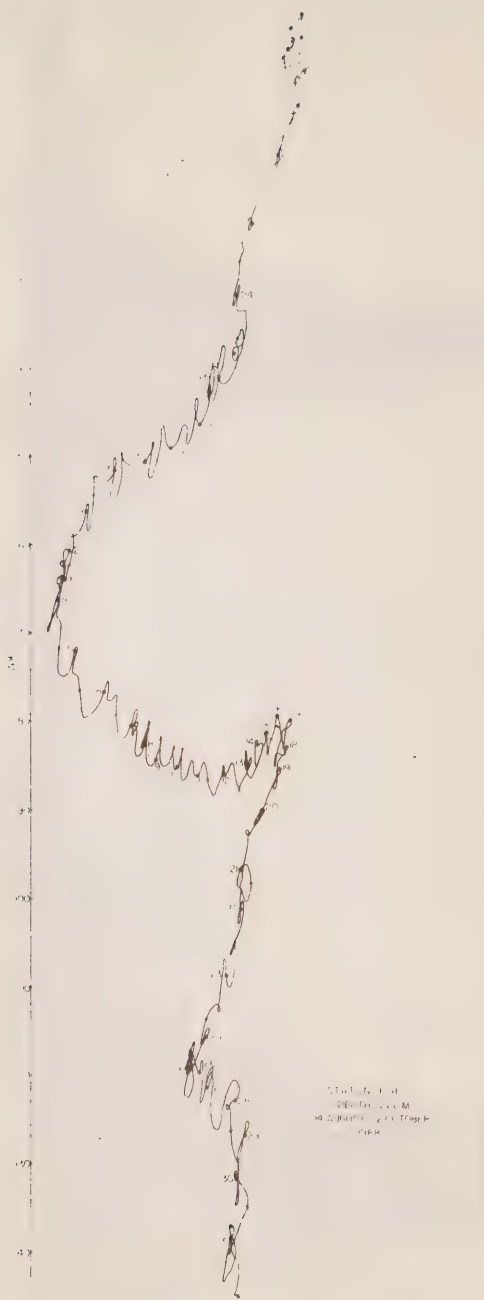


Fig. 3c. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 15-minute intervals over 49-day period during August 14 through October 2, 1968. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

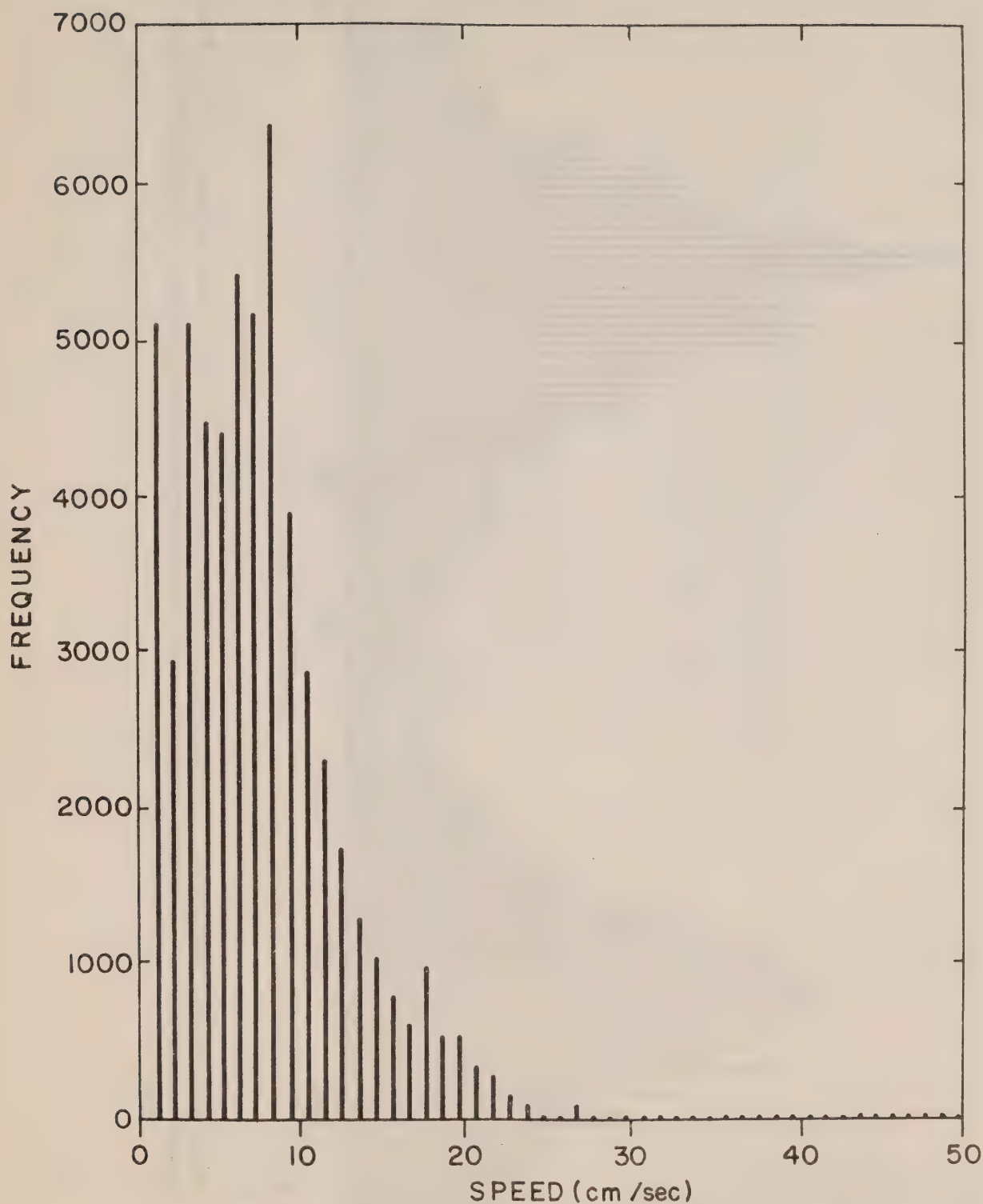


FIG. 4A. STATION M-10 AT 200M DEPTH. A HISTOGRAM OF SPEED (CM/SEC), WITH CLASS INTERVAL OF 1 CM/SEC FROM RECORDS OBTAINED AT 15-MINUTE INTERVALS OVER 42-DAY PERIOD DURING OCTOBER 17 THROUGH NOVEMBER 28, 1963. SPEED LESS THAN OR EQUAL TO 1 CM/SEC IS CONSIDERED TO BE "ZERO SPEED".

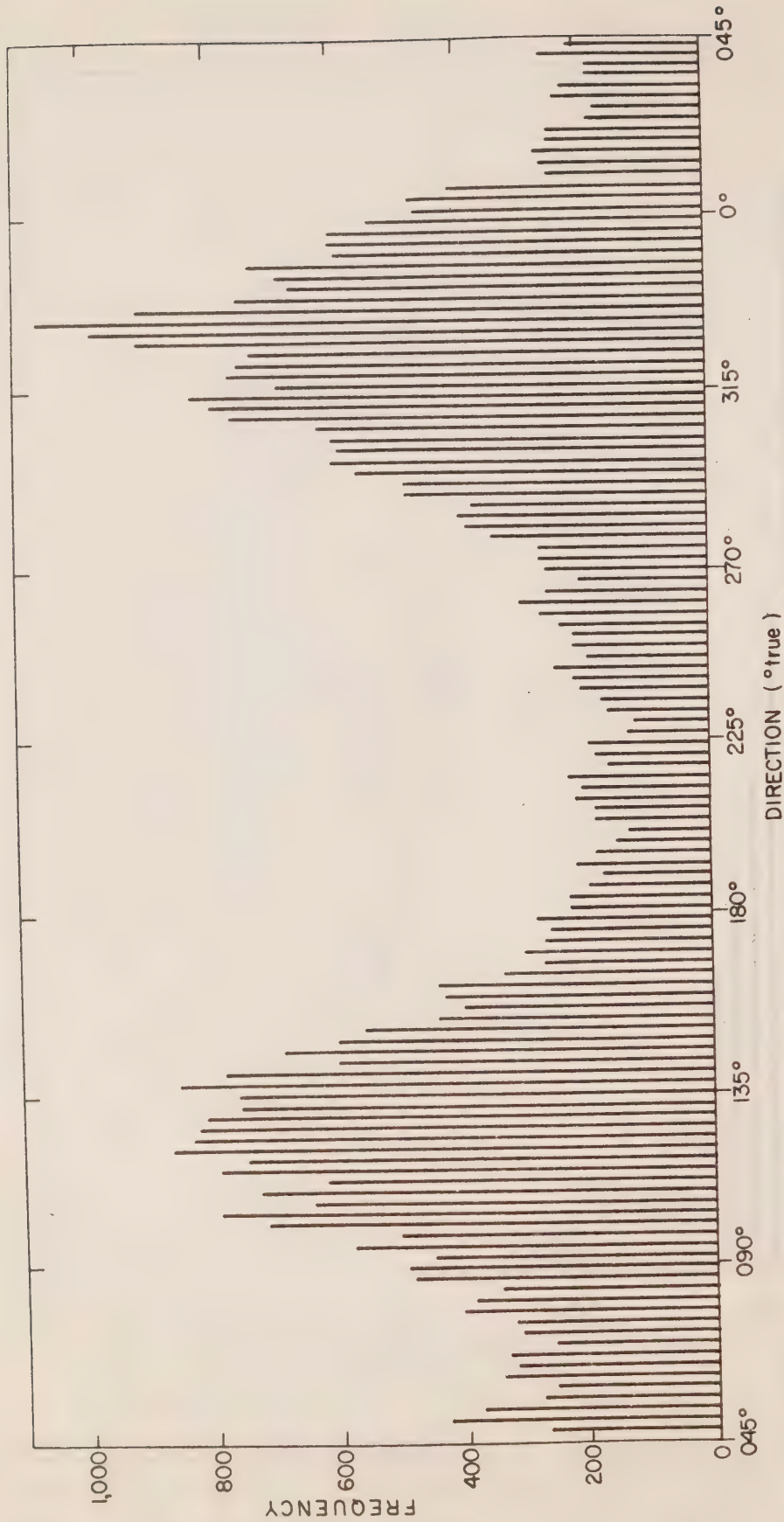


Fig. 4b. Station M-10 at 200m depth. A histogram of direction ($^{\circ}$ true), with class interval of 3° , from records obtained at 15-minute intervals over 42-day period during October 17 through November 28, 1968.

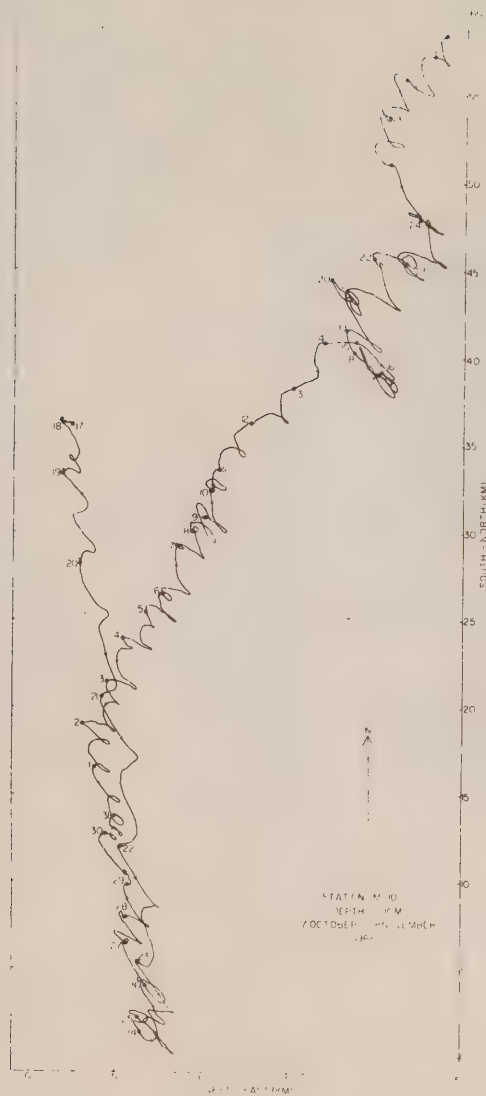


Fig. 4c. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 15-minute intervals over 42-day period during October 17 through November 28, 1968. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

STATION NO. I-31 LAT. 49-15.83 N LONG. 123-18.45 W

HISTOGRAM OF SPEED (MM/SEC) FOR CURRENTS AT A DEPTH OF 7 METRES
OBSERVATION PERIOD, FROM 21.52/24/ 7/69 TO 5.22/28/ 7/69

MEAN SPEED	FREQUENCY NO.	PCT.	0	10	20	30	40	50	60
			I	I	I	I	I	I	I
0	0	0	0						
10	0	0	0						
20	0	0	0						
30	0	0	0						
40	1	0	0*						
50	1	0	0*						
60	1	0	0*						
70	0	0	0						
80	1	0	0*						
90	0	0	0						
100	1	0	0*						
110	4	1	0****						
120	5	1	0*****						
130	14	3	0*****						
140	7	1	0*****						
150	24	5	0*****						
160	12	3	0*****						
170	16	3	0*****						
180	16	3	0*****						
190	14	3	0*****						
200	20	4	0*****						
210	22	5	0*****						
220	18	4	0*****						
230	12	3	0*****						
240	14	3	0*****						
250	14	3	0*****						
260	16	3	0*****						
270	16	3	0*****						
280	12	3	0*****						
290	18	4	0*****						
300	5	1	0*****						
310	6	1	0*****						
320	15	3	0*****						
330	4	1	0****						
340	25	5	0*****						
350	7	1	0*****						
360	11	2	0*****						
370	10	2	0*****						
380	13	3	0*****						
390	20	4	0*****						
400	9	2	0*****						
410	16	3	0*****						
420	14	3	0*****						
430	10	2	0*****						
440	7	1	0*****						
450	6	1	0*****						
460	2	0	0**						
470	7	1	0*****						
480	3	1	0***						
490	1	0	0*						
500	1	0	0*						
510	2	0	0**						
520	1	0	0*						
530	1	0	0*						
540	0	0	0						
550	1	0	0*						
560	0	0	0						
570	0	0	0						
580	0	0	0						
590	1	0	0*						

NUMBER OF SPEEDS GREATER THAN 590 = 0

NUMBER OF OBSERVATIONS = 477

MEAN SPEED = 280 MM/SEC

FIG. 5A. A HISTOGRAM OF SPEED (MM/SEC), WITH CLASS INTERVAL OF 10 MM/SEC, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 3 1/2-DAY PERIOD DURING JULY 24 THROUGH JULY 28, 1969. SPEED LESS THAN OR EQUAL TO 10 MM/SEC IS CONSIDERED TO BE "ZERO SPEED".

STATION NO. I-31 LAT. 49-15.83 N LONG. 123-18.45 W

HISTOGRAM OF DIRECTION (DEG. TRUE) FOR CURRENTS AT A DEPTH OF 7 METRES
OBSERVATION PERIOD, FROM 21.52/24/ 7/69 TO 5.22/28/ 7/69

MEAN DIR.	FREQUENCY NO.	PCT. I	0	10	20	30	40	50	60	70
0	11	2	0	0	0	0	0	0	0	0
5	8	2	0	0	0	0	0	0	0	0
10	14	3	0	0	0	0	0	0	0	0
15	19	4	0	0	0	0	0	0	0	0
20	26	5	0	0	0	0	0	0	0	0
25	11	2	0	0	0	0	0	0	0	0
30	14	3	0	0	0	0	0	0	0	0
35	23	5	0	0	0	0	0	0	0	0
40	18	4	0	0	0	0	0	0	0	0
45	15	3	0	0	0	0	0	0	0	0
50	20	4	0	0	0	0	0	0	0	0
55	12	3	0	0	0	0	0	0	0	0
60	10	2	0	0	0	0	0	0	0	0
65	14	3	0	0	0	0	0	0	0	0
70	5	1	0	0	0	0	0	0	0	0
75	7	1	0	0	0	0	0	0	0	0
80	6	1	0	0	0	0	0	0	0	0
85	4	1	0	0	0	0	0	0	0	0
90	7	1	0	0	0	0	0	0	0	0
95	5	1	0	0	0	0	0	0	0	0
100	5	1	0	0	0	0	0	0	0	0
105	3	1	0	0	0	0	0	0	0	0
110	5	1	0	0	0	0	0	0	0	0
115	5	1	0	0	0	0	0	0	0	0
120	6	1	0	0	0	0	0	0	0	0
125	7	1	0	0	0	0	0	0	0	0
130	2	0	0	0	0	0	0	0	0	0
135	3	1	0	0	0	0	0	0	0	0
140	3	1	0	0	0	0	0	0	0	0
145	5	1	0	0	0	0	0	0	0	0
150	3	1	0	0	0	0	0	0	0	0
155	6	1	0	0	0	0	0	0	0	0
160	8	2	0	0	0	0	0	0	0	0
165	11	2	0	0	0	0	0	0	0	0
170	8	2	0	0	0	0	0	0	0	0
175	10	2	0	0	0	0	0	0	0	0
180	8	2	0	0	0	0	0	0	0	0
185	8	2	0	0	0	0	0	0	0	0
190	9	2	0	0	0	0	0	0	0	0
195	13	3	0	0	0	0	0	0	0	0
200	14	3	0	0	0	0	0	0	0	0
205	5	1	0	0	0	0	0	0	0	0
210	5	1	0	0	0	0	0	0	0	0
215	2	0	0	0	0	0	0	0	0	0
220	5	1	0	0	0	0	0	0	0	0
225	7	1	0	0	0	0	0	0	0	0
230	3	1	0	0	0	0	0	0	0	0
235	3	1	0	0	0	0	0	0	0	0
240	0	0	0	0	0	0	0	0	0	0
245	1	0	0	0	0	0	0	0	0	0
250	2	0	0	0	0	0	0	0	0	0
255	1	0	0	0	0	0	0	0	0	0
260	2	0	0	0	0	0	0	0	0	0
265	1	0	0	0	0	0	0	0	0	0
270	4	1	0	0	0	0	0	0	0	0
275	5	1	0	0	0	0	0	0	0	0
280	0	0	0	0	0	0	0	0	0	0
285	0	0	0	0	0	0	0	0	0	0
290	1	0	0	0	0	0	0	0	0	0
295	1	0	0	0	0	0	0	0	0	0
300	4	1	0	0	0	0	0	0	0	0
305	0	0	0	0	0	0	0	0	0	0
310	2	0	0	0	0	0	0	0	0	0
315	2	0	0	0	0	0	0	0	0	0
320	2	0	0	0	0	0	0	0	0	0
325	3	1	0	0	0	0	0	0	0	0
330	3	1	0	0	0	0	0	0	0	0
335	3	1	0	0	0	0	0	0	0	0
340	3	1	0	0	0	0	0	0	0	0
345	2	0	0	0	0	0	0	0	0	0
350	5	1	0	0	0	0	0	0	0	0
355	9	2	0	0	0	0	0	0	0	0

NUMBER OF OBSERVATIONS = 477

FIG. 5b. A HISTOGRAM OF DIRECTION (°TRUE), WITH CLASS INTERVAL OF 5°, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 3 1/2-DAY PERIOD DURING JULY 24 THROUGH JULY 28, 1969.

STATION NO. I-31 LAT. 49-15.83 N LONG. 123-18.45 W
DIRECTION HISTOGRAM FOR CURRENTS AT 7 M. FROM 21.52/24/ 7/69 TO 5.22/28/ 7/69

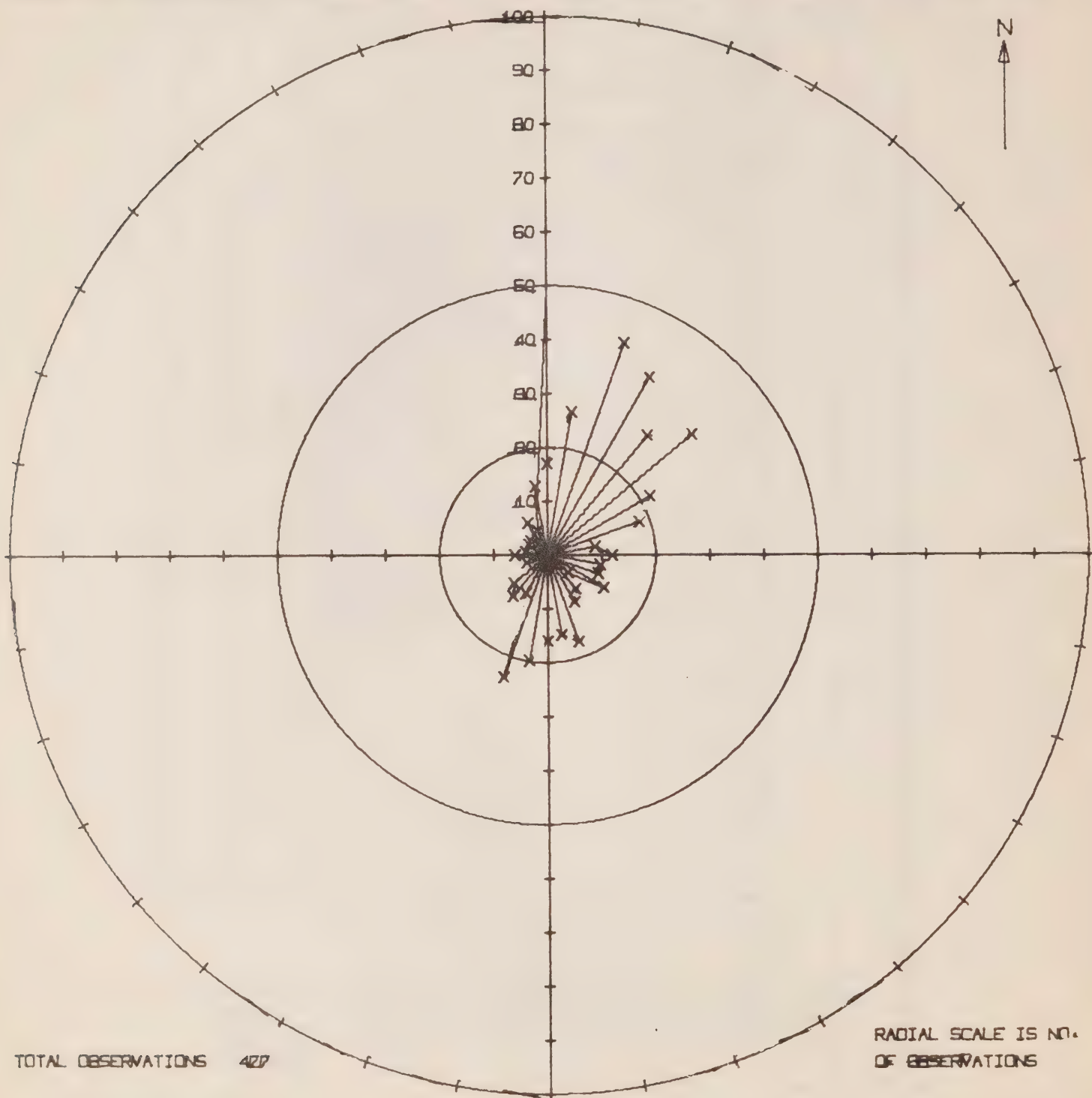


FIG. 5c. A HISTOGRAM OF DIRECTION ($^{\circ}$ TRUE) IN POLAR FORM, WITH CLASS INTERVAL OF 10° , BASED ON RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 3 1/2-DAY PERIOD DURING JULY 24 THROUGH JULY 28, 1969.

STATION NO. I-31 LAT. 49-15.83 N LONG. 123-18.45 W

HISTOGRAM OF TEMPERATURE (DEG. CENT.) AT A DEPTH OF 7 METERS
OBSERVATION PERIOD, FROM 21.52/24/ 7/69 TO 5.22/28/ 7/69

MEAN TEMP.	FREQUENCY NO.	PCT. I	10 I	20 I	30 I	40 I	50 I	60 I	70 I	80 I	90 I	100 I
10.00	0	0 0										
10.10	2	0 0**										
10.20	2	0 0**										
10.30	0	0 0										
10.40	0	0 0										
10.50	0	0 0										
10.60	1	0 0*										
10.70	0	0 0										
10.80	0	0 0										
10.90	0	0 0										
11.00	0	0 0										
11.10	2	0 0**										
11.20	0	0 0										
11.30	0	0 0										
11.40	0	0 0										
11.50	0	0 0										
11.60	0	0 0										
11.70	1	0 0*										
11.80	2	0 0**										
11.90	3	1 0***										
12.00	5	1 0*****										
12.10	4	1 0****										
12.20	2	0 0**										
12.30	0	0 0										
12.40	3	1 0***										
12.50	8	2 0*****										
12.60	4	1 0****										
12.70	6	1 0*****										
12.80	7	1 0*****										
12.90	9	2 0*****										
13.00	7	1 0*****										
13.10	5	1 0*****										
13.20	1	0 0*										
13.30	5	1 0*****										
13.40	3	1 0***										
13.50	2	0 0**										
13.60	3	1 0***										
13.70	3	1 0***										
13.80	5	1 0*****										
13.90	3	1 0***										
14.00	3	1 0***										
14.10	3	1 0***										
14.20	0	0 0										
14.30	5	1 0*****										
14.40	2	0 0**										
14.50	3	1 0***										
14.60	5	1 0*****										
14.70	6	1 0*****										
14.80	9	2 0*****										
14.90	4	1 0****										
15.00	5	1 0*****										
15.10	7	1 0*****										
15.20	2	0 0**										
15.30	6	1 0*****										
15.40	4	1 0****										
15.50	8	2 0*****										
15.60	5	1 0*****										
15.70	7	1 0*****										
15.80	8	2 0*****										
15.90	7	1 0*****										
16.00	4	1 0****										
16.10	4	1 0****										
16.20	6	1 0*****										
16.30	12	3 0*****										
16.40	9	2 0*****										
16.50	12	3 0*****										
16.60	12	3 0*****										
16.70	12	3 0*****										
16.80	11	2 0*****										
16.90	14	3 0*****										
17.00	16	3 0*****										
17.10	16	3 0*****										
17.20	7	1 0*****										
17.30	32	7 0*****										
17.40	20	4 0*****										
17.50	39	8 0*****										
17.60	26	5 0*****										
17.70	10	2 0*****										
17.80	7	1 0*****										
17.90	7	1 0*****										
18.00	2	0 0**										
18.10	1	0 0*										
18.20	1	0 0*										

NUMBER OF TEMP. GREATER THAN 18.20 = 0

NUMBER OF OBSERVATIONS = 477

MEAN TEMP = 15.79 DEG. C.

FIG. 5b. A HISTOGRAM OF TEMPERATURE (°C), WITH CLASS INTERVAL OF 0.05°C, FROM RECORDS OBTAINED AT 10-MINUTE INTERVALS OVER 3 1/2-DAY PERIOD DURING JULY 24 THROUGH JULY 28, 1969.

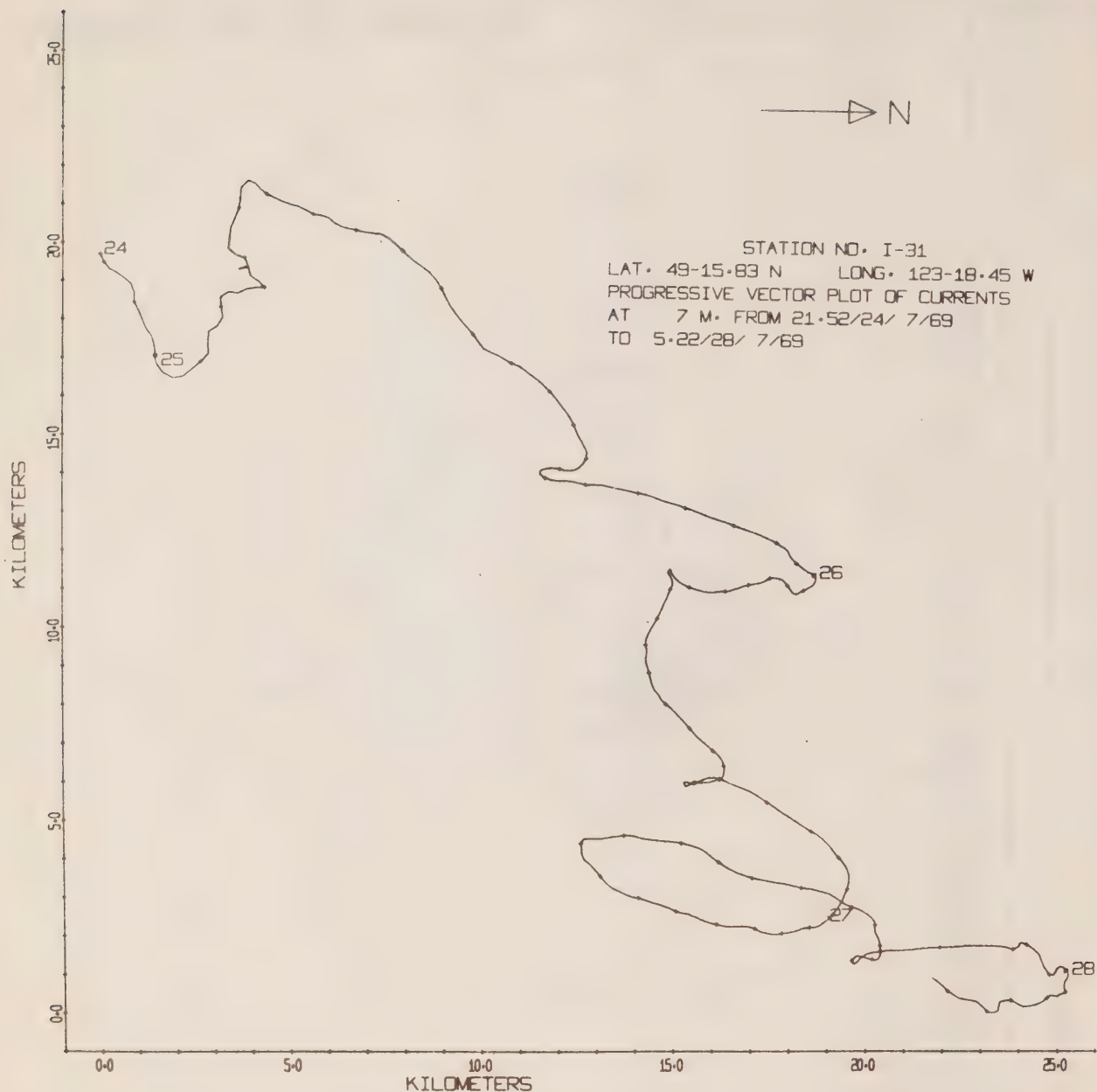
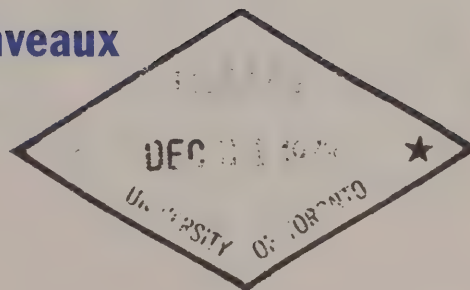


Fig. 5e. A progressive vector diagram constructed from successive cumulative values of north-south and east-west components of current velocity from records obtained at 10-minute intervals over 3 1/2-day period during July 24 through July 28, 1969. The spatial scale corresponds to the displacement of the water that would occur if the motion in the entire neighboring area of the location of the instrument was the same as at this location.

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OTTAWA 1973

PRELIMINARY REPORT ON THE OIL SPILL FROM THE GROUNDING FREIGHTER "VANLENE" MARCH, 1972

R.H. Herlinveaux



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Water Management Service
Marine Sciences Directorate
Pacific Region
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MARINE SCIENCES DIRECTORATE, PACIFIC REGION

PACIFIC MARINE SCIENCE REPORT NO. 72-11

*PRELIMINARY REPORT ON THE OIL SPILL
FROM THE GROUNDING FREIGHTER "VANLENE"*

March, 1972

by

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June, 1972

Introduction

On the evening of March 14, 1972 the freighter "Vanlene", bound for Vancouver from Japan, ran aground at the entrance to Barkley Sound on the west coast of Vancouver Island (Figure 1). (The "Vanlene" was sailing under a "flag of convenience", Panamanian registry.) At the time of collision the vessel was approximately 30 miles off course. Fortunately, the entire 38-man crew was rescued by the timely efforts of the Canadian tug "Neva Straits", which then transferred the survivors to CNAV "Laymore" - which had also been called to the scene - for landing at Alberni.

In the course of the grounding, several of the "Vanlene's" fuel and lubricating oil tanks were ruptured, the worst breaks occurring in the vicinity of the engine room; the oil immediately commenced to leak from the vessel (Figure 2). It may be noted that, at the time of grounding, the "Vanlene" had on board approximately a total of 100,000 imperial gallons of bunker B, diesel fuel and lubricating oil.

Several Canadian government ships had answered the distress message of the "Vanlene"; therefore on the first day of the spill CCGS "Camsell" and "Ready", along with CNAV "Laymore" and "Comox Post" of the Fisheries Service, were on the scene. "Sudbury II", the ocean-going tug of Seaspan International Ltd., also appeared in the area on tender to M.O.T. as a salvage vessel. Another sea-going tug, the CNAV "St. Anthony", was later brought into operation to transport pumps, "booms", "slicklickers" and supplies to the scene. The CSS "Vector" arrived on March 18 carrying Fisheries Research Board personnel to assess possible damage to shell fish and to the herring spawning grounds and also to survey the extent of oil contamination. The "Comox Post" and several fishing vessels were used by biology students from Simon Fraser University to conduct beach surveillance for oil.

Objectives of the Operation Described in this Report

After the rescue of the "Vanlene" crew, an operation primarily concerned with the effect of the oil spillage from the vessel came into being. Its objectives were:

1. The assessment of the oil-containing capacity of the vessel.
2. The arrangement for acquisition of material and equipment (booms , slicklickers , etc.) to combat spillage.

3. The determination of the extent of the spilled oil by aerial and surface reconnaissance.
4. The corraling of spilled oil by the use of two types of booms.
5. The "treatment" of oil with peat moss.
6. Experiments to determine the usefulness of booms and slicklickers in removing oil from open water.
7. The setting up of methods to efficiently assess the extent of the oil spill and to designate several "experimental" areas for observation to determine long-term effects.
8. Removal of oil remaining on the vessel.

Most of the above items will be thoroughly covered in separate reports to be issued later. The present report is therefore basically preliminary in nature.

General Weather Conditions

The air (40°-50°F) and water (40°-43°F) temperatures experienced during the period March 14-23 were not unseasonal. Precipitation was typical for this time and area; during the period of the operation there occurred three days of heavy rain (approximately 3 in/day) and several days of clear "westerly" weather, accompanied by offshore fog banks. The offshore winds were variable, several days of southeast winds being succeeded by westerlies interspersed with the odd day of northeast winds. This variability in the wind resulted in concomitant variability in sea state at the scene of the grounding.

Geographic Location

The grounding of the "Vanlene" occurred on rocks off Austin Island at the southwestern end of the Broken Group Islands in Barkley Sound (Figure 1).

The sound is a large, roughly rectangular body of water with three main channels: Trevor, Imperial Eagle and Loudoun, which are separated from each other by groups of islands. The coastline is indented by several narrow inlets and small bays. On the northwestern portion the foreshore consists basically of a gently-sloped rock and gravel beach, whereas elsewhere the foreshore tends to be rather steep and rocky.

Oceanographic and Meteorological Features

During the winter months runoff in the area tends to be extensive, four main rivers - Effingham, Toquart, Maggie and Sarita - being the main contributors within the sound. Alberni Inlet is a source of low-salinity runoff water from the more-inland drainage area.

During March, 1972 runoff was above average along the coast (Water Survey of Canada, private communication). Several estuarine circulation patterns can arise from varying runoff and changing meteorological conditions. These patterns can perhaps be illustrated by means of the surface-salinity distributions. Herlinveaux (1966) showed examples of these distributions from surface data collected in 1954, and deduced that these were basically two forms, as shown in Figures 3A and 3B. The associated circulations, on the basis of the few actual measurements conducted in the area at the time, are indicated by the arrows. Although the runoff was lower for the period dealt with in Figure 3 than in the working period in March, 1972 one might expect that the patterns would not change significantly in form but only perhaps in intensity.

The orographic features associated with the borders of the sound deflect the winds from a "normal" geostrophic pattern. As a result, winds tend to possess an onshore component, regardless of the wind direction off the west coast; the predominant components are westerly and southeasterly. The presence of diurnal winds, common when clear skies prevail, results in changes in wind direction in the morning and late evening. Periods of calm are generally associated with the times of change. At any given time, for moderate or light winds, marked variation can exist within the sound; this can, for example, be detected from the air by the variability in sea state. This characteristic of the wind within the area is believed to have a marked effect on surface-water movement. Examples of such movements are shown in Figures 4 and 5.

These figures (aerial composite photos of the area, courtesy of the Air Division of the Surveys and Mapping Branch, B. C. Department of Lands, Forests and Water Resources) show wind-wave movement from two dominant wind directions - westerly (Figure 4) and southeasterly (Figure 5). Also shown in these figures are "streaks" or "bands" of darker water (slicks). These are assumed to be associated with "oil" produced by organic material within the intertidal zones of the reefs and islets.

Throughout the entire period of the operation (March 14-23) a westerly swell predominated in the sound. The sea state varied with the wind intensity and direction.

The location of the "Vanlene" grounding is also indicated with a large "X" on Figure 4. This location is exposed to the open ocean environment from the southeast to the northwest, but tends to be in a "lee" position with respect to west and north.

Personnel

The co-ordinator of the project to study the consequences of oil spillage, Mr. L. E. Slaght of M.O.T., was assisted by personnel from various departments. Mr. R. Baird, of the Steamship Inspection Branch, was to report on the state of the "Vanlene" and to work in close cooperation with the Salvage Master of Seaspam. LCDR. S.J. Fairbairn, Canadian Forces, had the responsibility of acquiring vessels and equipment and supplies such as sea trucks, barges, "booms", peat moss, etc. all of which were on route to the area within a day. Mr. J. Bennett of Bennett Pollution Control Ltd. supervised the assembly and deployment of the "Bennett boom", and advised and assisted in the use of the large pump he had brought to the scene for emptying the vessel's oil tanks.

A team of biologists located at the Bamfield Marine Station was carrying out field work in the Bamfield area. Dr. W. Austin, head of the team, volunteered to move into the oil-affected area to determine the extent of contamination. Dr. Austin, assisted by Dr. L. Dreuhl, organized 30 to 40 University biology students to survey a number of sampling areas, some contaminated by oil, some not, for periodic examination in an on-going study to determine extent of permanent and temporary damage. This team continued to sample the area quite extensively up to March 19, and have since returned to the area several times.

Another group arrived on March 18 on the CSS "Vector". This group consisted of Dr. D. Quayle and Mr. D. Outram of the Pacific Biological Station, Nanaimo. They surveyed the vicinity of the islands and the herring spawning areas from Mayne and Toquart Bays to Amphitrite Point. They found little evidence of oil at this time; a few sea gulls were noticed to be spotted with oil but they could have flown in from areas nearer the wreck. It may be noted that Quayle and Outram returned to the area about three weeks later, on the neap-tide period; their findings on these two and on further investigations to be made will be published separately. Mr. A. Ages, who also accompanied this group, was interested in determining the extent to which the oil had spread. His conclusions have already been published (Ages, 1972). He also tried sampling the water column in several areas to determine if the oil was emulsified and had spread throughout the water column.

Capt. A. McRae, of the Fleet diving unit, Canadian Forces, had an eight-man diving team on board the CNAV "Laymore" at the time of the "Vanlene" sinking. The diving team was deployed to determine the extent of damage and to recover the ship's engineering logs and engineering diagrams; they succeeded in both tasks.

Aerial Surveys

Observations from a helicopter were carried out by Mr. Slaght whenever weather conditions permitted. The flights showed that the oil had travelled into Loudoun Channel (Figure 1) on the first day following spillage, but visibility was insufficient to carry out complete assessment of the area on a daily basis. However, those oil slicks that were noted were moving northwestward in the same general direction as the "natural" slicks shown in Figure 5.

These aerial surveys indicated that the oil most distant from the wreck was dispersing readily; attention was therefore focussed both on the oil in the immediate vicinity of the wreck and on that remaining aboard.

Observations

A "harbour boom" was first deployed through the islets north of the wreck, to the northerly side of Austin Island. This type of boom was constructed of large fishing floats, about 6" to 8" in diameter, strung on a nylon towline, the whole enclosed in a canvas-like material.

The original plan was to direct and localize the oil behind Austin Island so that it could be collected by the "slicklickers" when they became available. Unfortunately, before an attempt could be made to "gather up" the oil, the wind increased and the sea became somewhat choppy; the oil commenced "jumping" the harbour boom and moving away from the designated "corral".

The work boat from the CCGS "Camsell" was directed to proceed to the beach areas characterized by the heaviest concentration of oil (such as Cooper Island - Figure 6A) and also to any large slicks they could locate. The crew spread dry peat moss over the affected areas. The continuous torrential rains and the heavy surf in the vicinity of the beach made this spreading a thoroughly miserable job; at the beaches it became impossible to continue on the high tide because of large numbers of logs washed onto the foreshore. However,

approximately 30 bales of moss (each of approximately 10 cu. ft. in volume) were spread during the first day to hold the oil and prevent it from endangering bird life in that area.

In addition, the "Comox Post" was used both in transporting students to survey various locations (Page 4) and in spreading peat moss on very oily patches found around the islands.

On some contaminated beach areas the limbs of shoreline trees overhung the water at high tide. In one area the limbs of shoreline trees were covered in oil by the incoming tide.

RESULTS:

Removal of Oil from Fuel Tanks

On the morning of March 20, it appeared that at least one more tank containing bunker B had ruptured, even though it was believed that no significant quantity of such oil remained on the ship. The resulting slick, driven by a northeast wind, moved onto and between the seaward islands of Barkley Sound. Up to this time these islands had received very little oil. It was therefore decided that an attempt should be made to pump both the forward tank (believed to contain an appreciable amount of oil) and the engine room with the large "Bennett" pump. By evening, 2500 gallons had been removed. The next day, Seaspan personnel attempted to pump again, using a pump smaller than the Bennett type; some success was achieved.

Effectiveness of "Harbour" Booms

Harbour booms were the first used in the wreck area, and as long as there was little current and a calm sea oil could be corralled. However, most of the time foot-high seas moved the oil over the top of the boom; also if the water movement was perpendicular to the boom, some oil moved under the boom.

"Bennett" Boom

The Bennett boom was assembled alongside the wharf in Bamfield (Figure 7) in approximately 26 hours. The 1500 ft. boom basically consists of synthetic materials which were weighted down by a lead-like apron buoyed up by

"styrofoam logs". The apron hung 6 ft. down in the water while it extended up, like a sail, 2 ft. above the buoying system. The boom can be towed at a speed of at least 8 knots. After assembly it was towed out from Bamfield, but could not be put into operation immediately because of weather conditions. Finally, the boom was secured between the rocks to the north of the "Vanlene", and a tug towed the other end alongside the vessel (Figure 8). Some oil was actually corralled by the boom (Figure 9) but it could not be removed. On several occasions, a weather prediction for the following day was obtained by radio. Plans were therefore made to use the Bennett boom to take advantage of the "corralling effect" of the expected wind drift. Unfortunately, the weather system either moved faster than expected or did not materialize at all; thus by the time the boom was in place, the prevailing surface current was in an unprofitable direction (Figure 10).

On March 21 the boom was set out to the eastward of the wreck; it was planned to use slicklickers to pick up any intercepted oil. However, only a very small amount of oil appeared (Figure 11); in addition, the slicklicker was, unfortunately, non-operational.

The Bennett boom, when used as a surface-movement deflector, worked well and oil moving in the area could be directed as already noted (Figure 9). However, when the boom was used as a collector on the open coast (surface flow almost directly onto the boom) it did not stop the oil movement in the deeper water, but as it approached the shallows oil was very noticeably being collected (Figure 12). The oil did not "jump" the boom as it had in the harbour boom situation. On the basis of the present experience it is believed that, unless a very deep boom (which would be unwieldy) could be built, oil could never be effectively corralled in the presence of an appreciable swell and/or surface current. However, used as a deflector it worked rather well when the current flow direction was at an angle to the boom. It was planned, on one trial, to tow the Bennett boom in the shape of a "V" and operate a slicklicker at the apex of the "V", but sea conditions prevented such a trial.

Slicklickers

Two slicklickers appeared on the scene; one, the older type model and the other, new from the east coast. The older model was tried several times; however, the swell present even behind the island did not allow any oil to be "licked" up as the apparatus kept diving under the oil and picking up only water. On the first day of use, the newer machine was plagued with leakage problems due to loose plates in the flotation pontoons. This condition resulted in both motors being flooded with salt water. From this time on, the machine had to be pushed by a power barge.

CONCLUSIONS:

It was fortunate that the "Vanlene" oil spill was a minor one. It was quickly realized that, even for a spill of this size, the personnel involved were very inadequately equipped and generally ineffective in coping with the situation. Both types of booms ("Harbour" and "Bennett") used in an attempt to corral the oil, were found to be effective only as "deflectors" of the spill in open coastal areas. If the current was directly "onto" the booms, oil would move under them. The slicklickers were found to be of little use in open coastal areas.

Although the weather conditions hindered the oil retrieval operations, the heavy precipitation and run-off proved to be a blessing in disguise, since the fresh water runoff formed a stream around the shore of Barkley Sound which tended to keep the oil away from the shore. To some degree, this happened around the Broken Group Islands. Only when the weather had cleared and runoff had diminished did any significant quantity of oil show up on the foreshores. The high runoff in Barkley Sound also resulted in a strong estuarine flow along the northern shore which carried seaward, at a rate of up to 1.5 to 2.0 knots, any oil that entered it. This also indicated, however, that oil from the "Vanlene" could have been carried as far as Estevan Point (Figure 1) in a two-day period.

DISCUSSION AND RECOMMENDATIONS:

To deal with future crises of this nature, it is recommended that an "emergency measures group" be formed of representatives from M.O.T., C.F.B. and D.O.E. These representatives are to be contacted as soon as an oil spill occurs. They will then, as a group, proceed to the emergency area to assess the extent of the spill and thus to determine the size of the "clearing" operation required. The group itself could consist of a single person from each of the three departments. Each of these in turn would be backed up by one or more persons, who, once the degree of emergency was determined, would designate personnel in the appropriate department to carry out certain duties in the overall plan.

The most difficult task of such a procedure would be determination of the degree of emergency. Because of the many problems of handling oil on the open coast, a major effort should be expended, if feasible, to remove the ship from the grounding site and into a more "protected" or secluded location where the oil still aboard could be

removed more conveniently. However, if the general area involved is especially vulnerable to the effects of oil contamination (a recreational, fish-spawning or wildlife area) then the location to which the ship is to be moved must be extremely carefully selected to minimize the possibility of permanent ecological damage.

If the vessel cannot be moved, the problem becomes much more complicated. The primary objective would then be the removal of the oil from the vessel, the secondary one to direct the escaping oil itself to a confined area where it could be more easily removed. The tertiary target would be the clean-up of the shore.

In the case of tanker collisions in open coastal areas, the problem again changes. If the tanker can be towed into port the spilled oil at the collision site could be tracked by monitoring the surface drift with a transponder buoy; even better perhaps would be the use of current followers lying "in" the surface itself, eg. plywood sheets. When the general drift has been determined, equipment and ships could be deployed to an area where the oil could be contained and handled. A future possibility is tracking of oil spills by infra-red scanner in conjunction with film or video equipment.

The Department of Environment (D.O.E.) should have on file - and easily accessible - all work that has been carried out on water movements, locations of spawning grounds and nesting areas, etc. on the B. C. Coast. The information should include all published and unpublished data, together with a list of personnel who have been involved in such work and their fields of interest.

Suggested Equipment Requirements

1. Enough "walkie-talkie" equipment and/or portable radios to set up a communications network between all "local" working units and operational headquarters, with a common frequency assigned at least for the duration of the emergency.
2. A portable weather station and wave recorder for "local" use; in addition the data could be transmitted to the Atmospheric Environment Service's nearest major office for use in prediction of weather for the area.
3. Slicklickers that are not seastate limited eg. centrifuge ("cream-separator") type.
4. Peat-moss dispensers similar to "straw guns"; goggles for the operators of such equipment.

5. Rubber bag "dracons" both for the collection of oil and water mixtures from slicklickers and for the separation of the two constituents.
6. A pumping system capable of preheating bunker B and C oils, to facilitate emptying of vessel fuel tanks.
7. A system for "through-the-hull" sounding to determine fuel volumes remaining in directly inaccessible tanks.
8. A portable file (or a booklet) of aerial photographs, indicating sea and swell conditions to be expected with "major" wind systems, and surface drift, along the entire B. C. Coast.
9. Radio D.F. equipment at suitable locations along the B. C. Coast to aid in accurately determining positions of distressed vessels.

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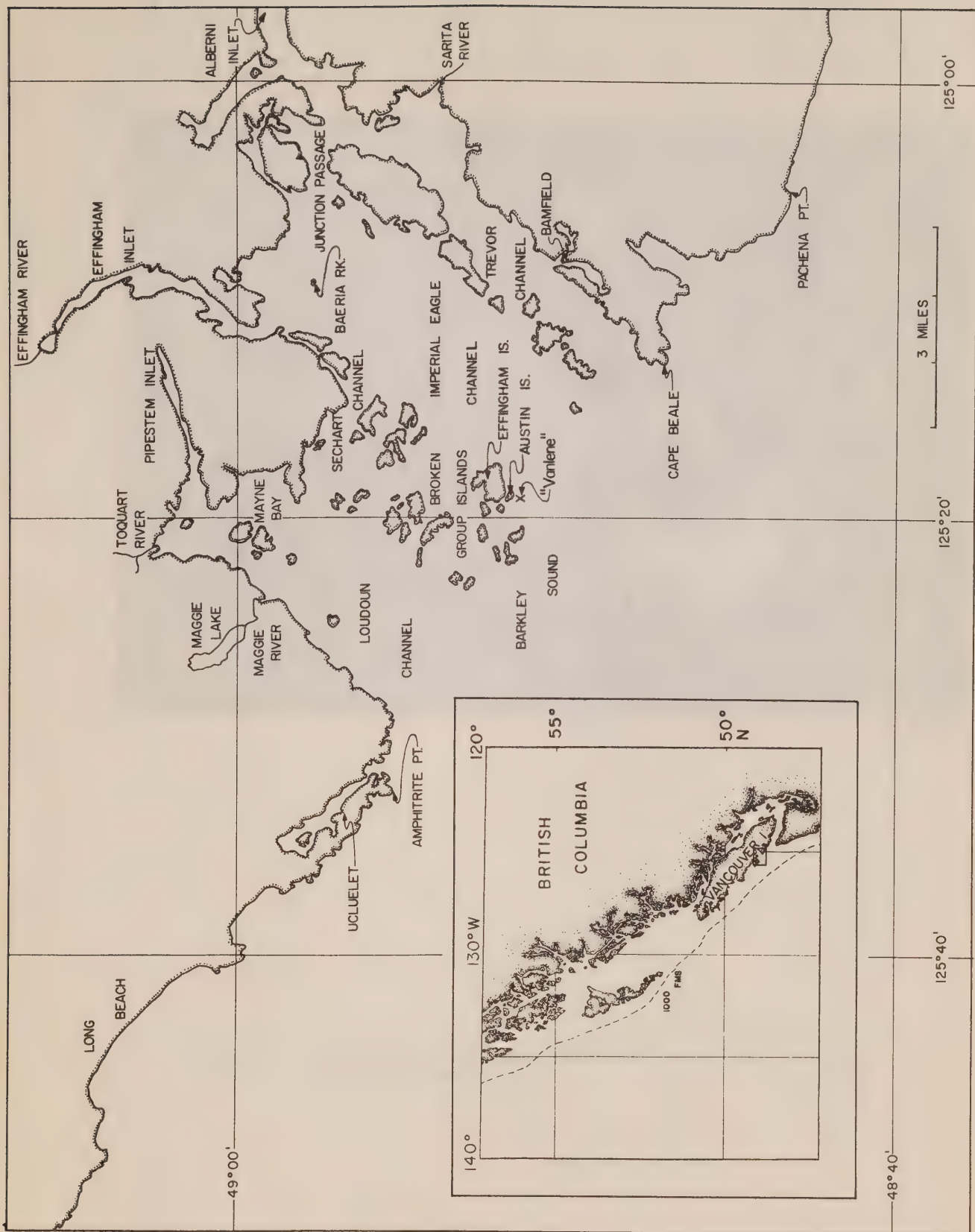


Figure 1 Map of the area showing the site of the "Vanlene" grounding in Barkley Sound.



Figure 2 The "Vanlene" aground off Austin Island,
Barkley Sound.

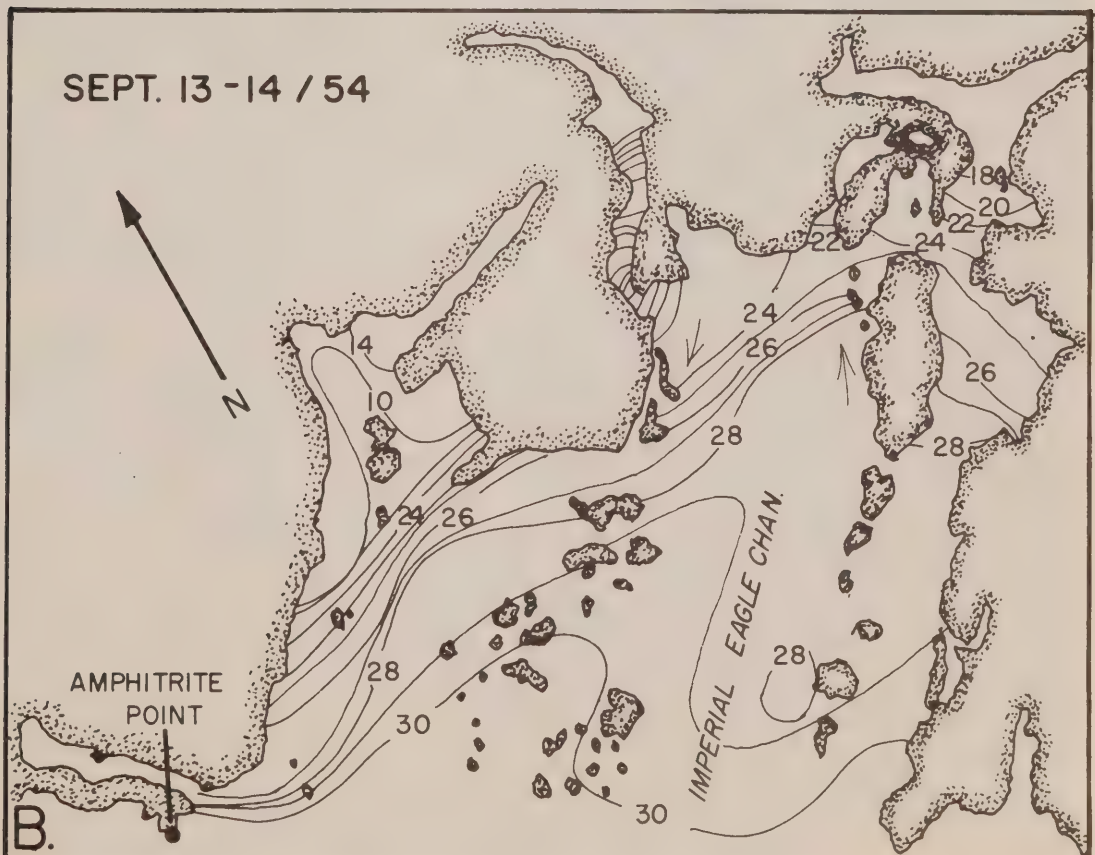
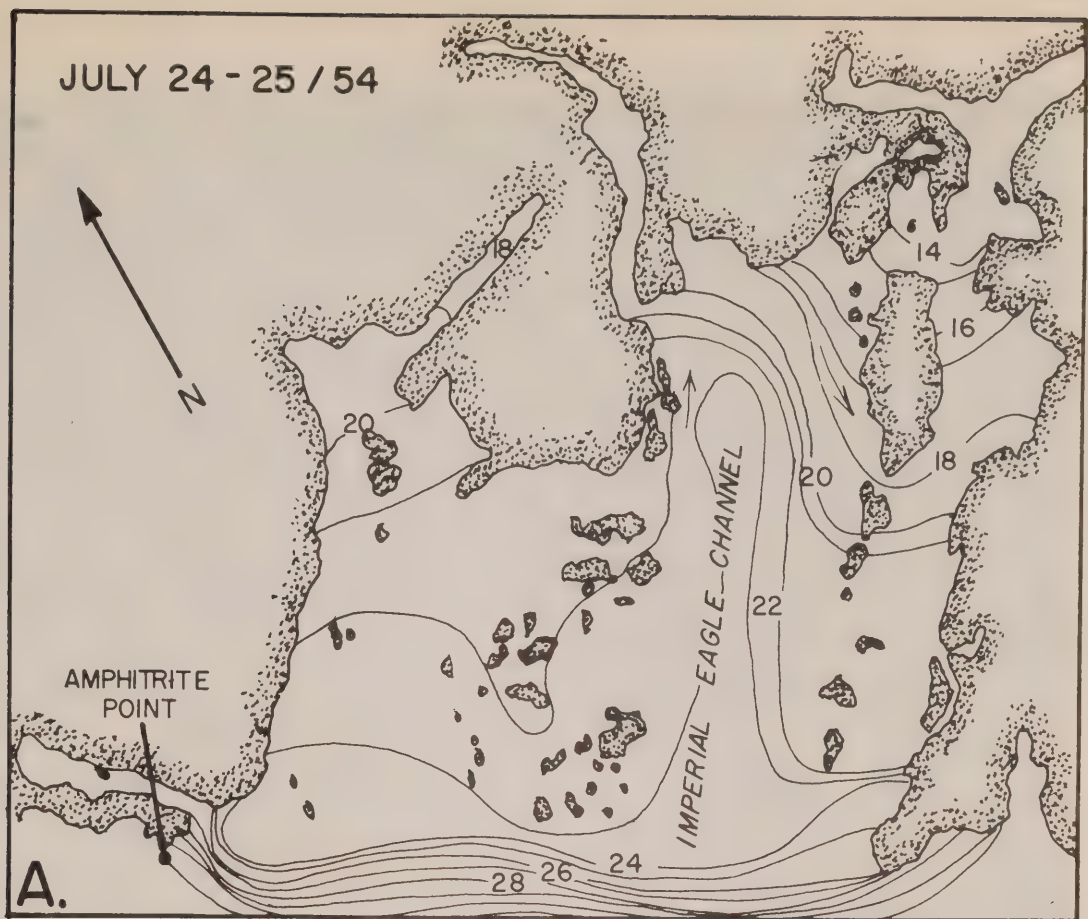


Figure 3 Representative surface-salinity distributions that were experienced in Barkley Sound during July and September, 1954.



Figure 4 Aerial composite photograph of the area (Air Division of the
Surveys and Mapping Branch, B. C. Department of Lands, Forest
and Water Resources) showing surface slick movement and wave
movement during westerly winds.



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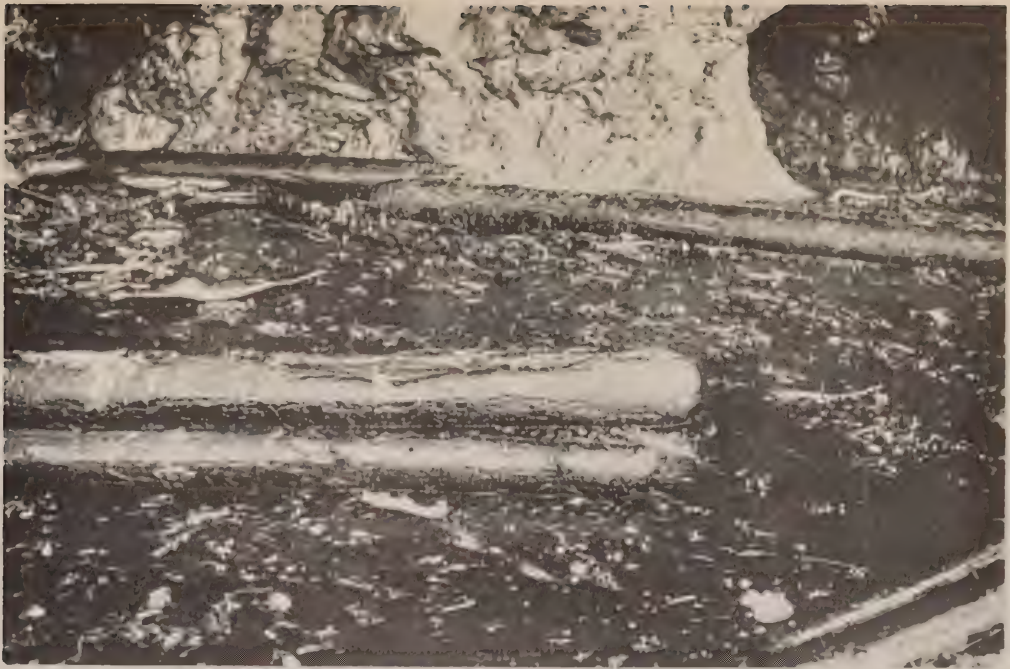


Figure 6A One portion of the oil-contaminated beach on Cooper Island.

Figure 6B An accumulation of oil in one of the bays in the area (Effingham Island).



Figure 7 Bamfield wharfs where the "Bennett" boom was assembled.



Figure 8 "Bennett" boom being towed by tug to an islet where boom was secured.



Figure 9 The "Bennett" boom secured to the islet and oil moving down boom in high enough concentration to be collected.



Figure 10 Oil slick reversing its direction of flow; boom in foreground at bottom of picture, CCGS "Camsell" at top.



Figure 11 Boom in position (little oil in the immediate grounding area).



Figure 12 "Bennett" boom in direct path of surface movement - oil on both sides of boom.



Figure 13 "Bennett" boom with the surface flow directly onto the boom from the right to mid-photograph and a flow at an angle to the boom in the shallower water to the left in the picture.

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